SONY

VIDEOCASSETTE RECORDER

BVW-40P



BETACAM

OPERATION AND MAINTENANCE MANUAL

Volume 1 1st Edition

Serial No. 10001 and Higher

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Volume 2

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SECTION 1
OPERATION

The BVW-40P is a video cassette recorder for recording and playing back a 1/2-inch video cassette tape with the newly developed Betacam format. The electronic editing using two BVW-40Ps or using a BVW-40P and another VTR such as a BVW-10P, BVU-800P, BVU-820P, BVH-2000PS, etc. is possible.

1-1. FEATURES

High quality picture
Even though only a 1/2-inch video cassette in the Beta format is used, the picture quality is close to that recorded on the 1-inch VTR.

Front access
Every operation, including cassette insertion and removal, can be performed from the front panel, which can be tilted up to 90° (6 steps) to suit your preference. The front panel can be removed so that it can be used as the remote control unit when connected with the optional BK-802 remote control cable.

Remote control
When editing using two BVW-40P video cassette recorders, the front panel controls of the recorder can also remotely control the player.

Edit functions
The manual or automatic editing in the assemble or insert mode can be performed by using two BVW-40Ps. The various functions such as entering the editing points, trimming, previewing, reviewing, etc. facilitate the editing. In the assemble mode, the video, audio channel 1, channel 2 and time code signals can be edited simultaneously. In the insert mode, the video, audio channel 1 and channel 2 and time code can be edited independently.

Quick access to the editing points
Search functions providing a recognizable picture in the shuttle mode (in which the playback speed can be varied in 16 steps from 1/30 to 10 times normal speed in both forward and reverse) and the jog mode (in which the picture changes as the search dial moves), enable operators to locate the editing point more quickly. Picture in color can be monitored at the speed from –5 to +5 times normal speed.

Automatic/manual video recording system
System provides a choice of either automatic or manual video recording level control.

Audio system
The audio recording and playback levels can be adjusted separately. If necessary, a limiter can be activated so that virtually distortion-free recordings of sudden, very strong input signals can be made. The channel 1 and channel 2 audio signals can be mixed while recording.

Connection with another video recorder and player
The BVW-40P can be directly connected to a VTR such as a BVW-10P, BVU-800P, BVU-820P, BVH-2000PS, etc., and can remotely control the connected VTR.
Editing using a Sony BVE-series editing control unit is also possible.

Built-in time code generator/reader
A built-in time code generator allows simultaneous recording of the time code during operation. The time code reading and playback are also possible using the built-in time code reader.

Independent time code track
The time code track is independent of the video track so that time code recording or erasing is possible.

Direct drive system with DC motors
Quick access to editing points is possible since independent DC motors drive the drum assembly, capstan assembly, supply and take-up reels and the tension on the tape is precisely set by a servo system.

Digital time counter
The time counter indicates the time code or the amout of tape advancement by counting the CTL signals, and facilitates locating editing points precisely.

Editing/duplicating connectors
The dubbing input and output connector for Betacam series VTR allows editing and duplicating of video signals with little degradation when two BVW-40Ps or a BVW-40P and a BVW-10P are used.

Audio noise reduction system
The BVW-40P employs the newly-developed C-type Dolby NR* system for audio tape noise reduction. You can turn on and off this audio noise reduction system.

Auto rewind/auto stop
At the end of the tape, the tape rewinds automatically to the beginning (auto rewind).
At the top of the tape, the tape stops automatically (auto stop).

Built-in time base corrector (TBC)
Built-in TBC makes possible a stable playback picture.

Plug-in type boards
Plug-in boards are designed for ease of service and maintenance. They are reached by simply removing the top panel.

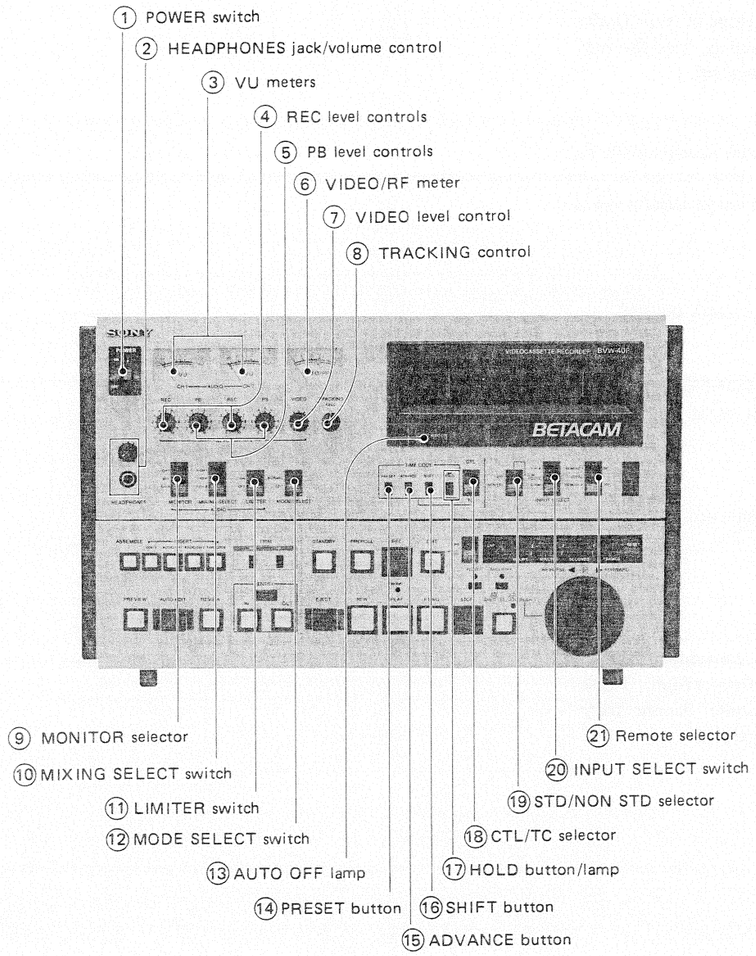
Mountable in standard 19-inch rack
The BVW-40P can be mounted in a standard 19-inch rack. For rack mounting refer to Section 2.

*"Dolby" and the double-D symbol are trade marks of the Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

1-2. LOCATION AND FUNCTION OF PARTS AND CONTROLS

1-2-1. Control Panel

Upper panel



① **POWER switch**

Press ON to turn on the power. The meters and the time counter display will light up.

② **HEADPHONES jack (stereo phone jack) / volume control**

Connect 8-ohm stereo headphones here. The audio during recording, edit-recording or playback can be monitored. The volume is adjusted with the volume control.

③ **VU meters**

Indicates the input audio level when the unit is in the record or E-to-E mode, and the output audio level when the unit is in the playback mode.

④ **REC (record) level controls**

To adjust the recording level controls manually, pull out the controls, when the unit is in the E-to-E mode, and adjust them so that the maximum value on the VU meter ③ is 0 VU.

With the controls pushed in, the recording level is automatically set as 0 VU at +4 dBm input (the factory preset level). (To change the preset value, refer to Section 2.)

⑤ **PB (playback) level controls**

To adjust the playback level controls manually, pull out the controls, when the unit is in the playback mode, and adjust them so that the maximum value on the VU meter ③ is 0 VU.

With the controls pushed in, the playback level is automatically set as the factory preset level (+4 dBm input at 600-ohm termination). (To change the preset value, refer to Section 2.)

⑥ **VIDEO/RF meter**

Indicates the input level of the composite video signal during recording or E-to-E mode, and the playback FM signal level (tracking level) during playback.

When the component (Y–R, B) or CTDM signal is input, the pointer of the meter does not swing.

⑦ **VIDEO level control**

Adjusts the input level of the composite video signal. When the unit is in the E-to-E mode, pull out and turn this control so that the pointer of the VIDEO/RF meter ⑥ is in the blue zone. At the pushed-in position, the proper level is automatically obtained.

⑧ **TRACKING control**

Adjusts the tracking of the tape during playback. Normally, set this control to the center FIXED position.

When a noise appears in the playback picture, turn this control so that the VIDEO/RF meter ⑥ needle points to the maximum value. After the playback of a tape with noise, return the control to FIXED.

While recording, always set this control to the FIXED position.

⑨ **MONITOR selector**

Selects the audio output signal from the HEADPHONES jack ②, and the AUDIO OUTPUT MONITOR connector (XLR 3 pin) or the MONITOR connector (8 pin) on the connector panel.

CH-1: Audio channel 1 sound

MIX: From the HEADPHONES jack, channel 1 sound from the left and channel 2 sound from the right. From the AUDIO OUTPUT MONITOR connector and the MONITOR connector, mixed sound of both channels.

CH-2: Audio channel 2 sound

⑩ **MIXING SELECT switch**

Selects the audio channel on which the mixed audio signals of the channels 1 and 2 are to be recorded.

To CH-1: The mixed signal will be recorded on channel 1. On channel 2, the audio signal of channel 2 only will be recorded.

OFF: The audio signal of channel 1 and channel 2 will be recorded on channel 1 and channel 2 respectively.

To CH-2: The mixed signal will be recorded on channel 2. On channel 1, the audio signal of channel 1 only will be recorded.

⑪ **LIMITER switch**

The limiter control circuit is actuated when this switch is set to ON. The circuit limits sudden surges of input signals to a fixed level during recording so that satisfactory recording characteristics can be obtained with low distortion.

After adjusting the audio recording level with the REC level controls, set this switch to ON.

⑫ MODE SELECT switch

NORMAL: Set to this position when playing back the tape or using the unit as a player of an editing system. The drum lock phase is advanced by the amount of delay caused by the built-in TBC so that the playback video signal will be correctly synchronized with the external reference signal.

EDIT: Set to this position when the unit is used as a recorder of an editing system. The drum lock phase will be synchronized with the external reference signal. The playback video signal will be delayed by 8H against the external reference signal.

The buttons for editing, such as ASSEMBLE, INSERT, EDIT buttons, etc. will be activated at this position.

On the monitor screen, V-blanking will be shifted by 8H against the normal position. If the output signal from the VIDEO OUTPUT connector does not need to be synchronized with the external reference signal, this shift can be avoided. Refer to Section 2 for details.

⑬ AUTO OFF lamp

Lights when the moisture condensation is detected on the head drum assembly.

⑭ PRESET button

Sets the time code after the desired digits are set using SHIFT ⑯ and ADVANCE ⑮ buttons.

⑮ ADVANCE button

Changes the blinking digit. Each press increases the digit by one.

⑯ SHIFT button

Changes the blinking position of the digits. Each press moves the blinking position to the right, and after it reaches the end, the figure of the left most position will blink.

⑰ HOLD button/lamp

Holds the data shown on the time counter display ㊻. The lamp will light up. When the button is pressed again, the lamp will go out and the current tape position will be displayed.

⑱ CTL/TC selector

Selects the indication on the time counter display ㊻ : CTL or time code. The reference signal for editing is also selected. When the remote selector ㉑ is set to REMOTE 1, the mode selected by the connected equipment will be indicated regardless of the setting of this selector.

⑲ STD/NON STD (input signal) selector

Set as follows depending on the signal connected to the VIDEO INPUT connector on the connector panel.

STD: When a composite video signal satisfying PAL standards is connected.

NON STD: When the luminance and chrominance signals of the connected composite signal are not interleaved, or when a modified PAL signal whose subcarrier frequency does not satisfy PAL standards is connected.

⑳ INPUT SELECT switch

Selects the input video signal for recording or editing.

COMPOSITE: For the composite video signal connected to the VIDEO INPUT connector

CTDM: For the CTDM (Compressed Time Division Multiplex) signal connected to the DUB/COMPONENT input connector

Y–R, B: For three component signals — Y, R–Y and B–Y — connected to the DUB/COMPONENT input connector

㉑ Remote selector

When two or more VTRs are connected to the REMOTE 1 or REMOTE 2 connector.

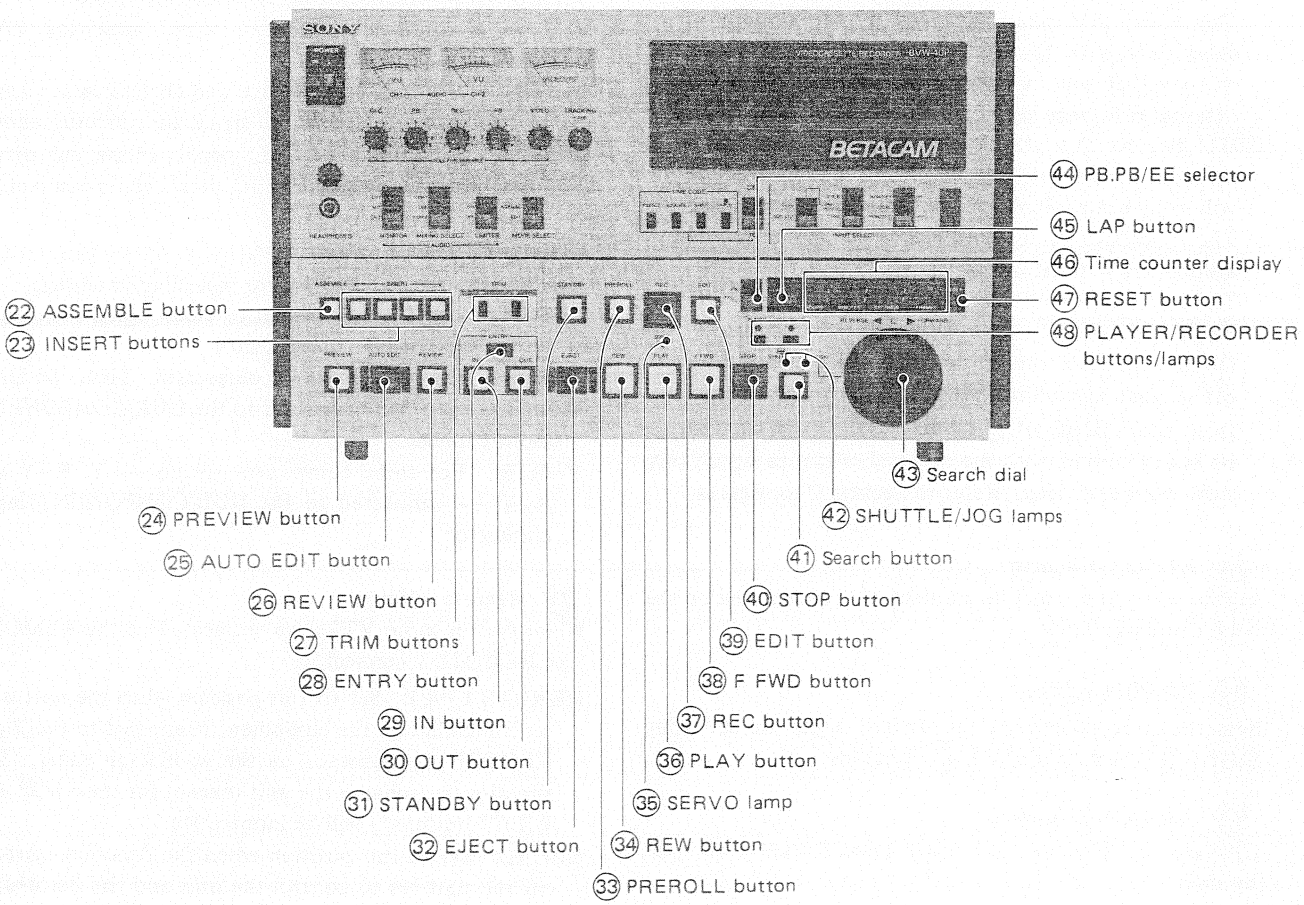
REMOTE 1 (9P): Set to this position when the unit is to be controlled by the equipment connected to the 9-pin REMOTE 1 connector on the connector panel. The function buttons on the unit (except for the STOP and EJECT buttons*) will be inoperative.

LOCAL: Set to this position when the function buttons on the unit are to control the unit and the connected equipment.

REMOTE 2 (36P): Set to this position when the unit is to be controlled by the equipment connected to the 36-pin REMOTE 2 connector on the connector panel. The function buttons on the unit (except for the STOP and EJECT buttons*) will be inoperative.

* Refer to Section 2 to make additional function buttons operative or to make all the buttons inoperative.

Lower panel



(22) ASSEMBLE button

Press this button to set the unit in the assemble edit mode. Pressing the button will light up the button itself, and the button will go out when the button is pressed again.

(23) INSERT buttons

Press one of these buttons to set the unit in the insert edit mode and to select the input signal for editing. Pressing the button will light up the button itself, and the button will go out when the button is pressed again.

(24) PREVIEW button

After entering the editing points, press this button for an edit-recording rehearsal. The tapes run in the same manner as in edit-recording so that the editing results can be monitored on the monitor for the recorder but the edit-recording will not be performed. If the IN point has not been entered, the preview will be performed from the point where this button is pressed to the OUT point, and that point will be entered as the IN point.

(25) AUTO EDIT button

After entering the editing points, press this button to perform the automatic edit-recording. If the IN point has not been entered, the automatic edit-recording will be performed from the point where this button is pressed to the OUT point.

(26) REVIEW button

Press this button to review the edit-recorded picture and sound.

(27) TRIM buttons

The entered editing points can be modified any number of frames. While pressing the IN (29) or OUT (30) button, press the TRIM + or TRIM – button. Every time the TRIM + button is pressed, the editing point advances by one frame, and every time the TRIM – button is pressed, the editing point returns by one frame.

㉘ ENTRY button
Press this button and the IN ㉙ or OUT ㉚ button simultaneously to enter the IN or OUT point. The pressed button will light up.

㉙ IN button
Press this button and the ENTRY button ㉘ simultaneously to enter the IN point. When only this button is pressed after entering the IN point, the data of the IN point will be displayed on the time counter display ㊻

㉚ OUT button
Press this button and the ENTRY button ㉘ simultaneously to enter the OUT point. When only this button is pressed after entering the OUT point, the data of the OUT point will be displayed on the time counter display ㊻

㉛ STANDBY button
While the power is on, this button lights to indicate that the drum rotates and the unit is in the standby mode.
When this button is pressed during the stop mode, the drum will stop rotating, the tension on the tape is released and this button goes off (standby off mode). When the stop mode continues more than 8 minutes, the unit also enters the standby off mode. The standby off mode protects the video head from being clogged. To put the unit in the standby mode or in other function mode, press the STANDBY button or the desired function button (except the STOP button).

㉜ EJECT button
When this button is pressed, the tape is unthreaded and the cassette is ejected. The time counter is reset and the "0:00:00:00" will be displayed on the time counter display ㊻ when the display is in the CTL mode.
Be sure to eject the cassette after every use before the power is turned off.

㉝ PREROLL button
Press this button to run the tape to a preroll point (5 second prior to the IN point).
If the IN point has not been entered and this button is pressed, the point where the button has been pressed will be entered as the IN point and the preroll will proceed.

㉞ REW (rewind) button
Press this button to rewind the tape.

㉟ SERVO lamp
Lights when the drum servo and the capstan servo are locked.

㊱ PLAY button
Press this button to play back the tape.
Press this button and the REC ㊲ or EDIT ㊴ button simultaneously to start recording or manual edit-recording.
While recording or edit-recording, press this button and the recording or edit-recording will end and the unit enters the playback mode.

㊲ REC (record) button
Press this button and PLAY button ㊱ simultaneously to start recording.
While pressing this button in the playback, search, fast forward or rewind mode, the E-to-E mode video and audio can be monitored. When this button is pressed in the stop mode, the unit enters the E-to-E mode. Press the STOP button to set the unit in the stop mode.

㊳ F FWD (fast forward) button
Press this button to advance the tape rapidly.

㊴ EDIT button
Press this button and the PLAY button simultaneously to start the manual edit-recording.
While pressing this button in the playback, search, fast forward or rewind mode, the E-to-E mode video and audio can be monitored. When this button is pressed in the stop mode, the unit enters the E-to-E mode and the input signal selected by the ASSEMBLE ㉒ or INSERT ㉓ buttons can be monitored. Press the STOP button to set the unit in the stop mode.

㊵ STOP button
Press this button to stop the tape running. A still picture can be seen on the monitor screen. In the stop mode, the drum rotates and the tape is threaded.
When a cassette is inserted into the unit, the unit is automatically set in the stop mode.

㊶ Search button
Press this button to set the unit in the search mode.
Press this button after setting the search dial to the appropriate position in the shuttle mode, and the playback at the speed set by the search dial will begin.

㊷ SHUTTLE/JOG lamps
The SHUTTLE lamp lights when the unit is in the shuttle mode and the JOG lamp lights when the unit is in the JOG mode.

㊸ Search dial
Turn this dial to quickly locate the desired editing point. The clockwise rotation makes the tape run forward (▷ lamp lights), and the counterclockwise rotation makes the tape run backward (◁ lamp lights). While the tape stops, the □ lamp lights.
Pressing the dial in sets the unit in the jog mode and pressing it again set the unit in the shuttle mode, and the corresponding lamp lights.
SHUTTLE: Turn the dial clockwise or counterclockwise. The tape speed can be varied from 1/30 to 10 times normal in either direction. At the center position, a still picture is obtained.
JOG: Turn the dial and the tape runs in the direction and at the speed of the rotation from 0 to 1 normal speed. When you stop the rotation of the dial, a still picture will be obtained.
- When the power is turned on, be sure to set the dial to the center position before it is used.

㊹ PB.PB/EE selector
Selects the output signal—playback (PB) or E-to-E (EE)—fed to the VIDEO OUTPUT connector in the fast forward, rewind, stop or standby mode.

Mode Switch position	Fast forward Rewind	Stop	Standby
PB	PB	PB	PB
PB/EE	EE	EE	EE

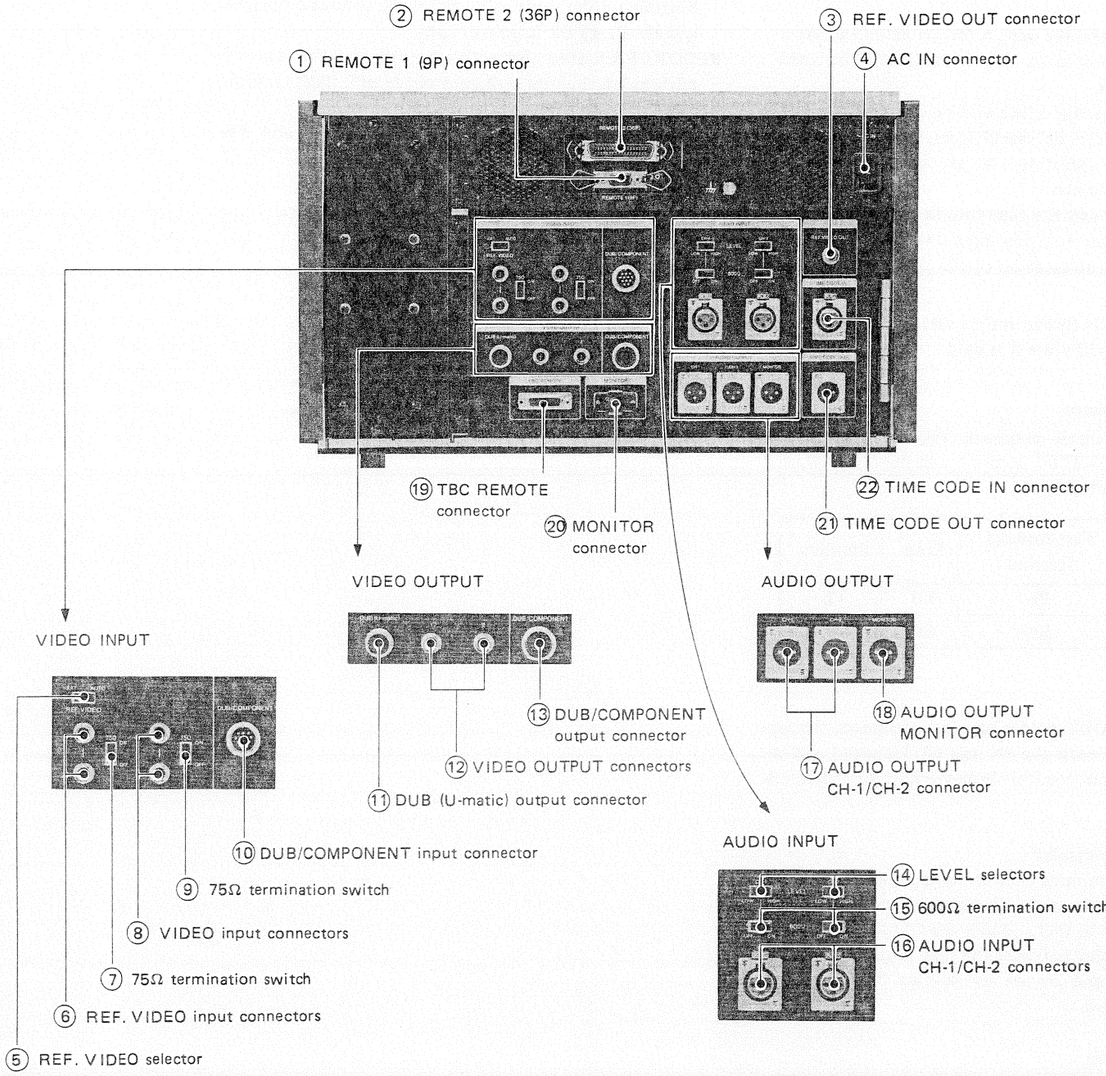
㊺ LAP button
When the IN and OUT points have been entered, the lap time (duration between the IN and OUT points) will be indicated at the time counter display while this button is pressed.

㊻ Time counter display
Indicates the tape running time in hours, minutes, seconds and frames by counting the CTL signals when the CTL/TC selector ⑭ is set to CTL. When the CTL/TC selector is set to TC, the display indicates the tape position in hours, minutes, seconds and frames by reading the time code recorded on the tape.

㊼ RESET button
Press this button to reset the CTL time counter and to clear the entered editing points. When the CTL/TC selector ⑭ is set to CTL, the time counter display ㊻ is also reset to "0:00:00:00". When the CTL/TC switch is set to TC, the display does not change.

㊽ PLAYER/RECORDER buttons/lamps
When the unit is connected to the other editing equipment with the 9 pin REMOTE 1 connector and is used as a recorder of an editing system, use these buttons.
PLAYER button: Press this button and the function buttons on the unit will control the connected player, and the PLAYER lamp will light.
RECORDER button: Press this button and the function buttons on the unit will control the unit itself, and the RECORDER lamp will light.
- When the unit is used singly, the PLAYER and RECORDER buttons do not function.

1-2-2. Connector panel



① REMOTE 1 (9P) connector (9 pin)
Connect another BVW-40P or a BVW-10P, a U-matic VTR such as a BVU-800P or 820P, or a BVE series editing control unit such as a BVE-800, with a 9-pin remote control cable (supplied).

② REMOTE 2 (36P) connector (36 pin)
Connect a BVE series editing control unit such as a BVE-500A, 1000, 5000, etc. with a 36-pin remote control cable (optional).

③ REF. VIDEO OUT (reference video signal output) connector (BNC type)
The output signal from the built-in black burst generator is supplied. When an external reference signal cannot be supplied to the connected VTR, connect this connector to the REF. VIDEO IN or EXT. SYNC IN connector on the player.

④ AC IN connector
Connect to an ac power source with the ac power cord supplied.

⑤ REF. VIDEO (reference video) selector
Selects the reference signal.
EXT: The signal connected to the REF. VIDEO INPUT connectors ⑥ will be the reference signal.
AUTO: Normally, set the switch to this position. During recording, the input signal connected to the VIDEO INPUT connector ⑧ or DUB/COMPONENT input connector ⑩ will be the reference signal. During playback, the reference signal will be selected according to the setting of the MODE SELECT switch on the control panel.
- The selection of the reference signal is effected by other switches.

⑥ REF. VIDEO (reference video) input connectors (BNC type)
Connect a reference video signal having the chroma burst signal (VBS).
A bridge connection can be made. When both connectors are used for bridge connection, be sure to set the 75Ω termination switch ⑦ to OFF.

⑦ 75Ω termination switch
This is the termination switch of the REF. VIDEO input connectors ⑥.
ON: When either of the connectors is used.
OFF: When both connectors are used for bridge connection.

⑧ VIDEO INPUT connectors (BNC type)
Connect a composite video signal.
A bridge connection can be made. When both connections are used for bridge connection, be sure to set the 75Ω termination switch ⑨ to OFF.

⑨ 75Ω termination switch
This is the termination switch of the VIDEO INPUT connectors ⑧.
ON: When either of the connectors is used.
OFF: When both connectors are used for bridge connection.

⑩ DUB/COMPONENT input connector (12 pin)
Connect the component video (CTDM) signal from the BVW-10P or BVW-40P with the 12-pin dubbing cable (supplied).

⑪ DUB (U-matic) output connector (7 pin)
The dubbing video signal for a U-matic VTR is supplied. Connect to the DUB IN connector of the U-matic VTR using a 7-pin dubbing cable (optional).

⑫ VIDEO OUTPUT connectors (BNC type)
The composite video signal is supplied.
Connect to the video input connector on a VTR or a video monitor.

⑬ DUB/COMPONENT output connector (12 pin)
The component video signal of the luminance (Y), chrominance (R-Y, B-Y) and the Compressed Time Division Multiplex (CTDM) is supplied.
To dub or to edit video signal by using two BVW-40Ps, connect to the DUB/COMPONENT input connector on another BVW-40P with the 12-pin dubbing cable (supplied).

⑭ LEVEL selectors
Set to the appropriate position according to the input level of the audio signal connected to the AUDIO INPUT connectors ⑯.
LOW: –60 dB (for microphone input)
HIGH: +4 dB (for line input)

⑮ 600Ω termination switches
Selects the input impedance when the LEVEL switch ⑭ is set to HIGH.
ON: 600 ohms
OFF: 10 k ohms

⑯ AUDIO INPUT CH-1/CH-2 connectors (XLR 3 pin)
Connect audio signals from microphones or audio equipment.

⑰ AUDIO OUTPUT CH-1/CH-2 connectors (XLR 3 pin)
The audio signals are supplied. The output level is controlled by the PB level control on the control panel.
Connect to the audio input connectors on another VTR.

⑱ AUDIO OUTPUT MONITOR connector (XLR 3 pin)
Connect to an audio equipment for monitoring audio. The audio signal selected by the MONITOR selector and MIXING SELECT switch on the control panel is supplied.

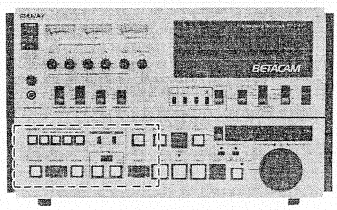
⑲ TBC REMOTE connector (15 pin)
To remotely control the built-in time base corrector (TBC), connect a BK-2007 remote control unit (optional).

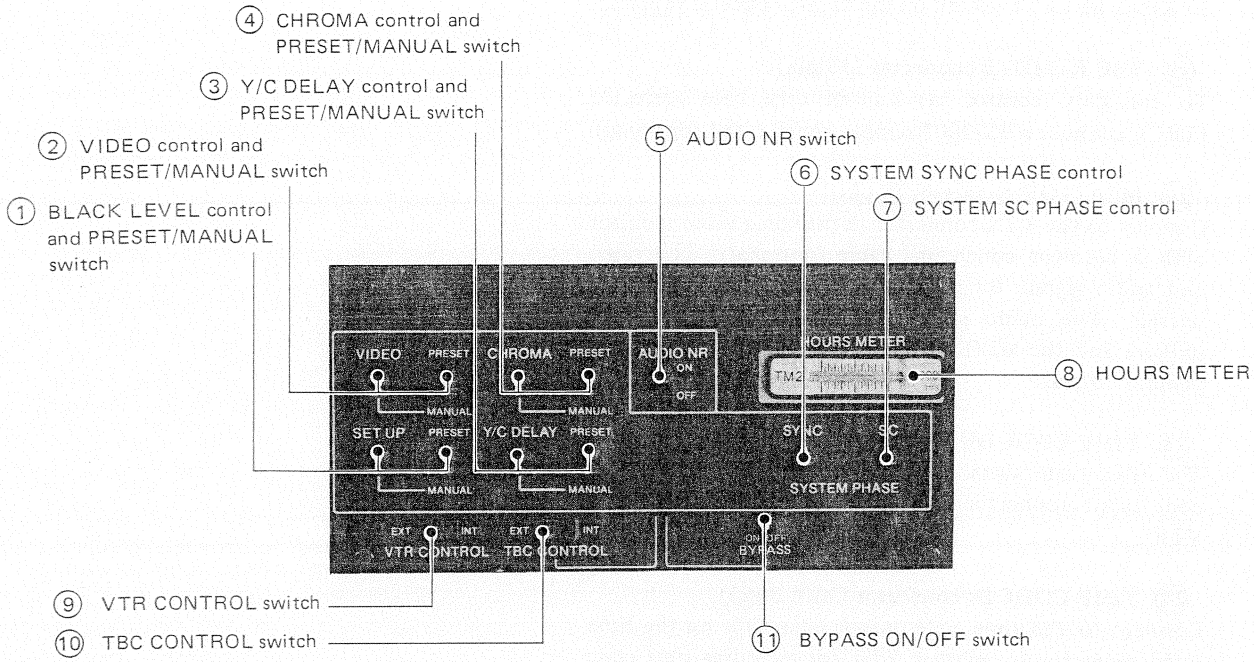
⑳ MONITOR connector (8 pin)
Connect to the VTR connector (8 pin) on a video monitor with a monitor connecting cable (optional). The video and audio signals for monitoring are simultaneously connected. The audio signal selected by the MONITOR selector and the MIXING SELECT switch on the control panel is output.

㉑ TIME CODE OUT connector (XLR 3 pin)
The time code signal is supplied. Connect to the time code input connector on a time code reader or another VTR.

㉒ TIME CODE IN connector (XLR 3 pin)
Connect to the time code output connector on the time code generator or another VTR for recording time code signal.

1-2-3. Sub Control Panel





① BLACK LEVEL control and its PRESET/MANUAL switch

When the PRESET/MANUAL switch is set to:

MANUAL: The output black level can be adjusted within a range of 0 to +15 IRE by using the BLACK LEVEL control.

PRESET: The output black level is set at the preset level regardless of the position of the control.

② VIDEO control and its PRESET/MANUAL switch

When the PRESET/MANUAL switch is set to:

MANUAL: The composite video signal output level can be adjusted within a range of ±3 dB by using the VIDEO control. As for the chroma level adjustment range, the total adjustment range cannot exceed +3 dB when used with the CHROMA control.

PRESET: The output video level is set at the preset level regardless of the position of the control.

③ Y/C DELAY control and its PRESET/MANUAL switch

When the PRESET/MANUAL switch is set to:

MANUAL: The Y/C delay difference can be adjusted within a range of ±50 nsec.

PRESET: The Y/C delay difference is set at the preset value regardless of the position of the control.

④ CHROMA control and its PRESET/MANUAL switch

When the PRESET/MANUAL switch is set to:

MANUAL: The output chroma level can be adjusted within a range of ±3 dB by using the CHROMA control. The total adjustment range cannot exceed +3 dB, however, when used with the VIDEO control.

PRESET: The output chroma level is set at the preset level regardless of the position of the control.

⑤ AUDIO NR (audio noise reduction) switch

This unit employs the C-type Dolby NR system for audio tape noise reduction.

ON: To record and play back the tape with the Dolby NR process, set the switch to this position.

OFF: To record and play back the tape without the Dolby NR process, set the switch to this position.

⑥ SYSTEM SYNC PHASE control

Adjusts the output sync phase with respect to the reference input to the BVW-40P within a range of −1 μsec to +3 μsec. Use this control, for instance, to bring the output phase in line with the broadcast's reference, or when two or more VTRs are being used with this unit to produce special effects such as fades and lap-dissolve.

⑦ SYSTEM SC PHASE control

Adjusts the output subcarrier phase with respect to the reference input to the BVW-40P within a range of 360° p-p. Use this control, for instance, to bring the output phase in line with the broadcast's reference, or when two or more VTRs are being used with this unit to produce special effects such as fades and lap-dissolve.

⑧ HOURS METER

This meter indicates the total elapsed time that the video head drum has rotated (max. 1000 hours).

⑨ VTR CONTROL switch

INT: Normal position.

EXT: To remotely control the unit with the control panel which has been removed from the unit and has been connected with the BK-801 40-pin flat cable (optional).

⑩ TBC CONTROL switch

INT: To control the built-in time base corrector (TBC) with the sub control panel.

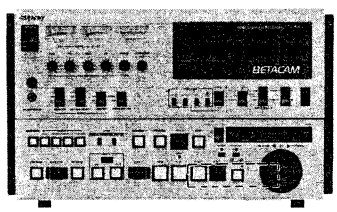
EXT: To remotely control the built-in TBC with a BK-2007 remote control unit (optional).

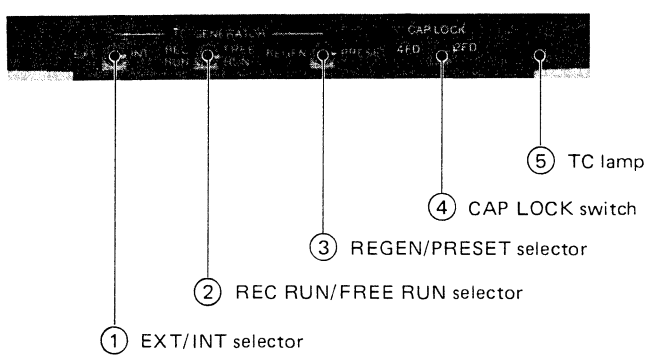
⑪ BYPASS ON/OFF switch

Usually set to OFF.

When the composite video signal which cannot be synchronized with the reference video signal such as a signal transmitted by the microwave network is to be recorded, the E-to-E signal on the monitor may be unstable during recording even though the recording is performed normally. In such a case, synchronize the signal with the reference signal using the frame synchronizer or set this switch to ON.

1-2-4. Time Code Board





① EXT/INT selector

EXT: When an external time code generator is used.

INT: When a built-in time code generator is used.

② REC RUN/FREE RUN selector

REC RUN: The time code generator operates only when the VTR is in the record mode.

FREE RUN: The time code generator operates at all times irrespective of the VTR mode. If the generator is set to the standard time, the recording time will be recorded on the tape.

③ REGEN/PRESET selector

REGEN: The built-in time code generator synchronizes with the time code signal played back by the unit or the other VTR or with an external time code generator.

PRESET: The built-in time code generator is preset by the SHIFT, ADVANCE and PRESET buttons on the control panel.

④ CAP LOCK (capstan servo lock) switch

2FD: Usually use this position.

4FD: At this position, 4 field sequence time code for the PAL system is obtained during playback, and the capstan phase control is performed referring to the playback time code. Therefore the consecutive time code with correct phase should be recorded on the tape played back.

Note: If the consecutive time code with correct phase is not recorded on the tape, use the 2FD position.

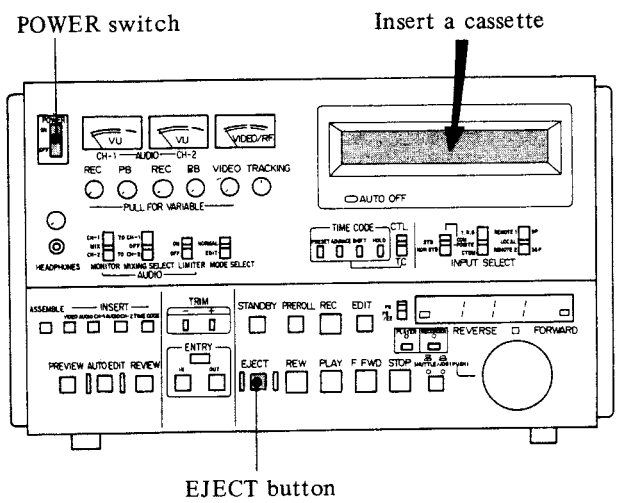
⑤ TC (time code) lamp

Lights during tape running when the time code has been recorded on the tape played back by the unit.

1-3. CASSETTE INSERTION AND REMOVAL

To insert a cassette

Set the POWER switch to ON and insert a cassette.
The cassette is automatically pulled in, the tape will be threaded, the drum will rotate and a still picture will be displayed.

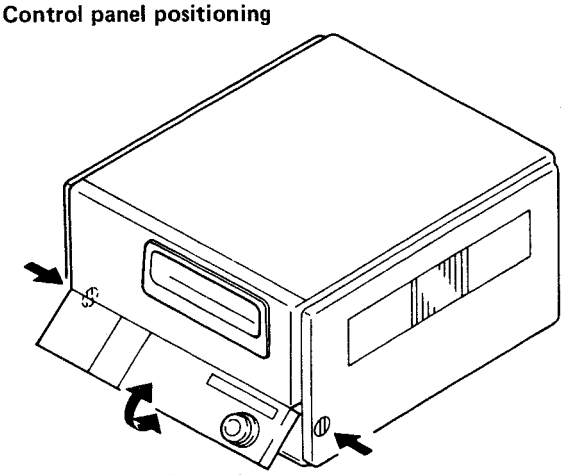


To remove a cassette

Press the EJECT button while the power is on.
The tape will be unthreaded, and the cassette will be automatically ejected.

- Be sure to eject the cassette after every use.

Control panel positioning



2 The control panel can be tilted in 6 steps up to 90°.

1 Loosen the stopper screws on the both sides with a coin or a large screwdriver.
3 Tighten the serew after adjustment.

- The control panel can be detached for full function remote control by cable. For details, see Section 2.

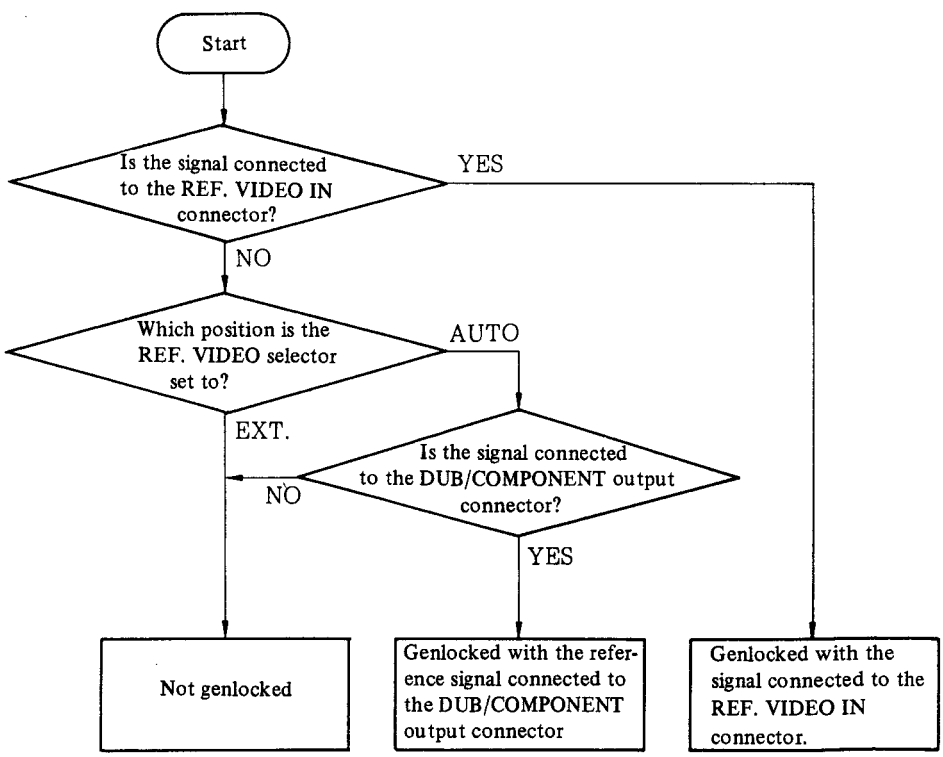
1-4. REFERENCE SIGNAL FOR BUILT-IN TIME BASE CORRECTOR AND SERVO SYSTEM

1-4-1. Reference Signal

The BVW-40P is equipped with a video (black burst) signal generator so that editing can be performed without supplying an external reference signal. The output signal of the signal generator is supplied to the built-in TBC and the servo circuit and also to the REF. VIDEO OUT connector on the connector panel. If an external reference signal for the editing system for tape-to-tape editing cannot be obtained, connect the REF. VIDEO OUT connector to the REF. VIDEO IN or EXT. SYNC IN connector on another VTR. When two BVW-40Ps are connected with the 12-pin dubbing cable (supplied), the reference signal will be supplied through the dubbing cable.

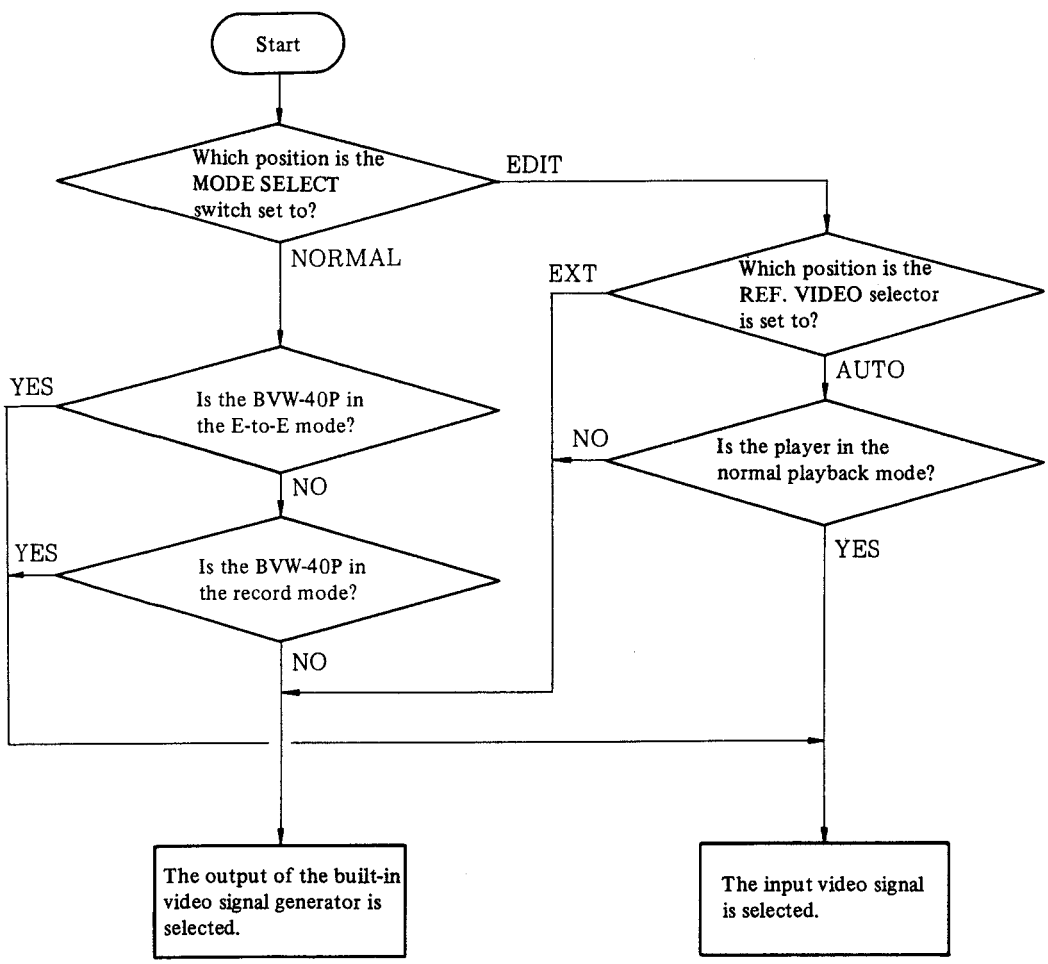
1-4-2. Genlock of the Built-in Video Signal Generator

The built-in video signal generator will lock with an external reference signal if it is supplied. The following chart shows which signal is used as the reference signal.



1-4-3. Selection of the Reference Signal for Servo System

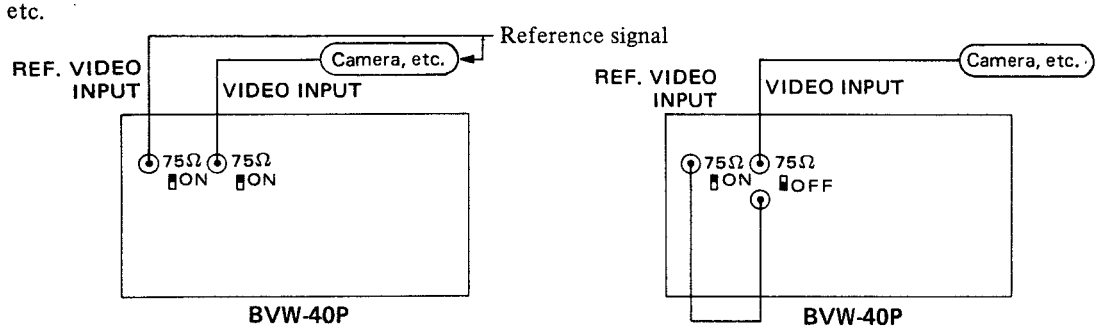
The reference signal for the servo system will be automatically selected from the input video signal (selected by the INPUT SELECT switch) or from the output of the built-in video signal generator. The following chart shows you which signal is selected.



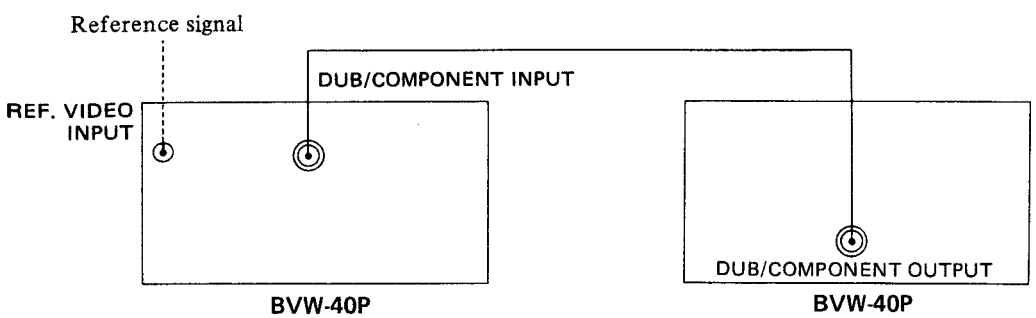
1-4-4. Connection of the Reference Signal

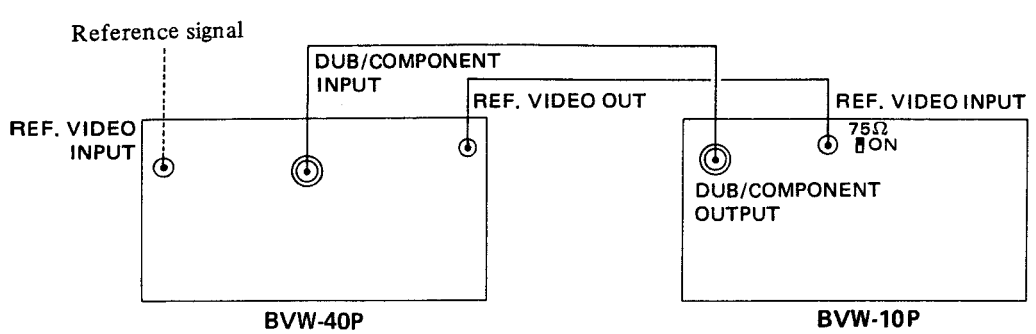
Recording

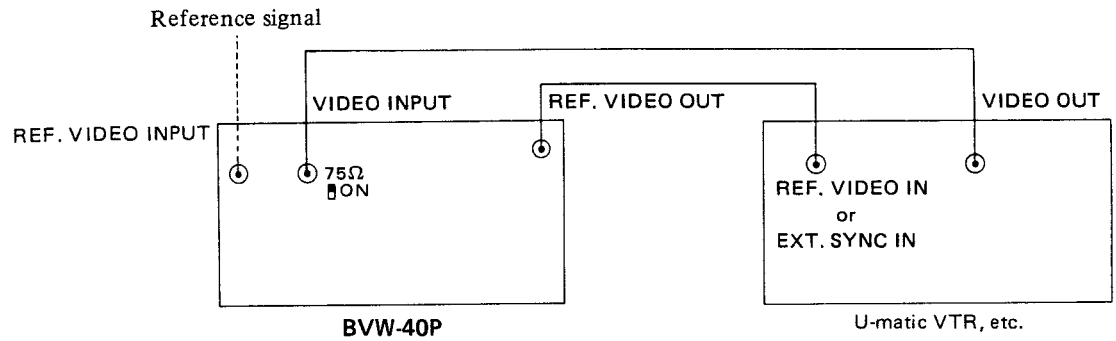
(1) Recording the signal from a camera, a signal generator, etc.

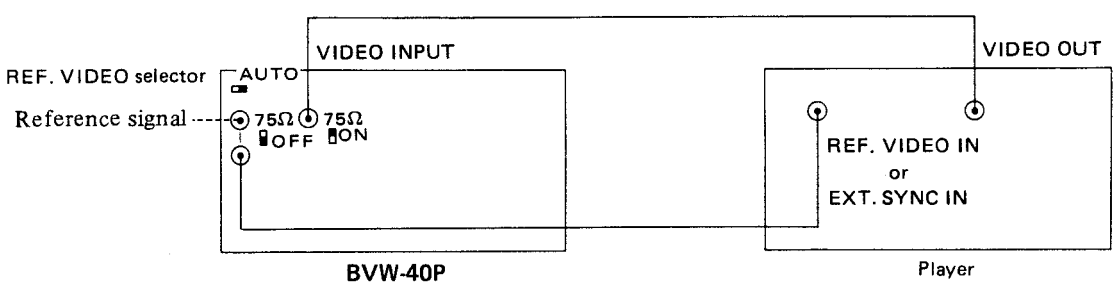


(2) Recording the signal from a VTR

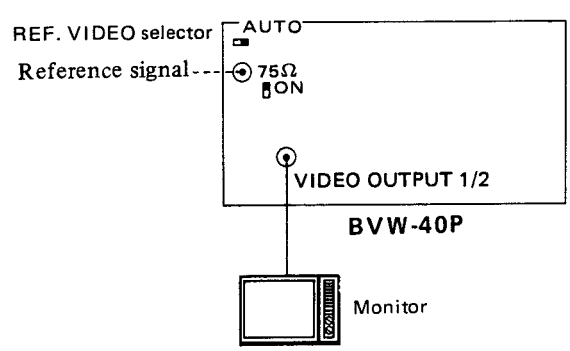





Reference signal
VIDEO INPUT
REF. VIDEO OUT
VIDEO OUT
REF. VIDEO INPUT
75Ω
ON
REF. VIDEO IN
or
EXT. SYNC IN
BVW-40P
U-matic VTR, etc.


VIDEO INPUT
VIDEO OUT
REF. VIDEO selector
AUTO
Reference signal
75Ω
75Ω
OFF
ON
REF. VIDEO IN
or
EXT. SYNC IN
BVW-40P
Player

Playback


REF. VIDEO selector
AUTO
Reference signal
75Ω
ON
VIDEO OUTPUT 1/2
BVW-40P
Monitor

1-5. RECORDING

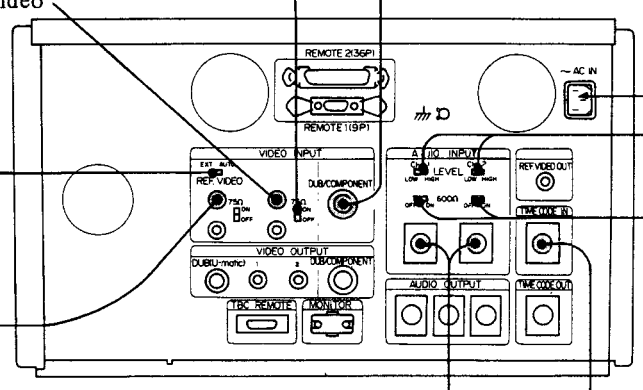
1-5-1. Preparations

To record the composite video signal

75Ω termination switch
Single Use → ON
When a looping output is employed → OFF
When the unit is used as a terminate machine of the bridge connection → ON

To duplicate component video signal
Video input (from a BVW-10P, BVW-40P, etc.)

Video input (from a video camera, VTR, etc.)



AC power source

LEVEL selectors
Microphone input → LOW
Line input → HIGH

REF. VIDEO selector
Normally set to AUTO.
To synchronize with an external reference signal, set to EXT.

600Ω termination switches
For 600 ohm input → ON
For 10 k ohm input → OFF

Reference signal

Audio input

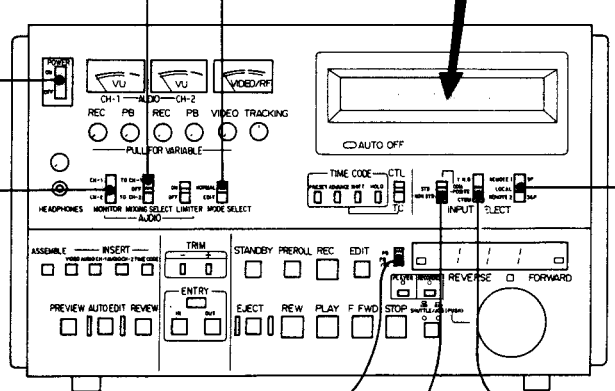
Time code input

MODE SELECT switch
→ NORMAL

MIXING SELECT switch
→ OFF

Insert a cassette.

POWER switch
→ ON



MONITOR selector
→ MIX

Remote selector
→ LOCAL

PB. PB/EE selector
→ PB/EE

INPUT SELECT switch
To record the video signal connected to the VIDEO INPUT connector
→ COMPOSITE
To record the three component signal (Y, R-Y, B-Y) connected to the DUB/COMPONENT input connector
→ Y-R, B
To record the CTDM signal connected to the DUB/COMPONENT input connector
→ CTDM

STD/NON STD selector
When the INPUT SELECT switch is set to COMPOSITE, set as follows.

If the signal connected to the VIDEO INPUT connector is standard PAL signal → STD
If the signal connected to the VIDEO INPUT connector is not standard PAL signal
→ NON STD

1-5-2. Operation

1. Adjust the video level.

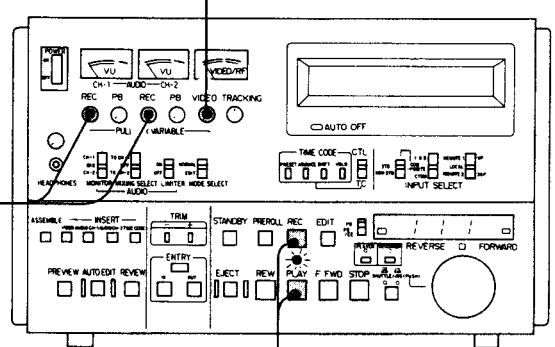
Automatic adjustment

Keep the VIDEO level control to the pushed-in position. The video signal will be recorded at an appropriate level.

Manual adjustment

To record the composite video signal, pull out the VIDEO level control and adjust it so that the pointer of the VIDEO/RF meter is within a blue zone.

The CTDM and the component VIDEO signal cannot be adjusted manually.



2. Adjust the audio recording level.

Preset level

Keep the REC level controls to the pushed-in position. The audio signal will be recorded at the preset level (0 VU at +4 dBm input).

Manual adjustment

Set the LIMITER switch to OFF, and pull out the REC level controls and adjust them so that the pointers of the VU meters read approximately 0 VU at the maximum deflection.

If you want to record audio using the limiter, set the LIMITER switch to ON.

3. Press the PLAY and REC buttons simultaneously.

The recording will start and the REC and PLAY buttons will light. When the servo is locked, the SERVO lamp will light.

To stop recording

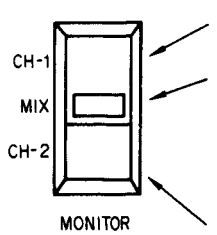
Press the STOP button. The STOP button lights.

- If the tape reaches the end, it will automatically rewind to the beginning and stop.

To monitor video and audio signals

The picture and sound on the video monitor can be selected by the PB.PB/EE selector, playback video and audio signal (PB) or input video and audio signal in Electronics-to-Electronics mode (EE).

The audio channel to be monitored can be selected by the MONITOR selector.



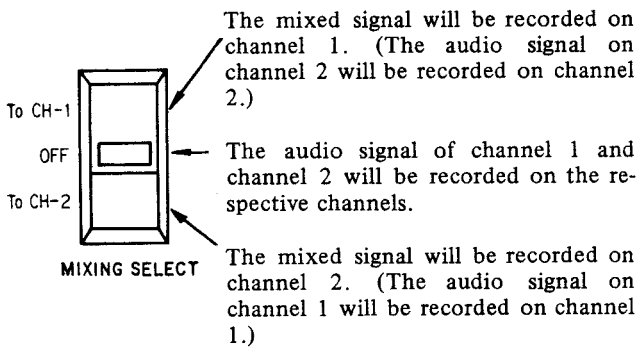
Audio channel 1

Both channels from the HEADPHONES jack and mixed sound of both channels from the AUDIO OUTPUT MONITOR connector and MONITOR connector.

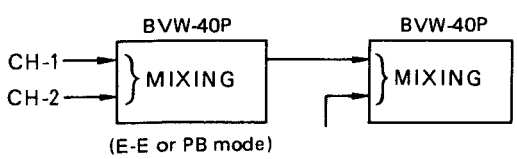
Audio channel 2

To record the mixed sound of channels 1 and 2

The audio signals of channel 1 and channel 2 can be mixed during recording. It is also possible to record the mixed signal on either channel 1 or channel 2 by setting the MIXING SELECT switch as follows:



- The mixed audio input signals of channels 1 and 2 will be mixed recorded at the same level.
- When two BVW-40Ps are connected, three of audio signals can be mixed.



Tape protection

If the unit stays in the stop mode for more than 8 minutes, the unit will automatically turn off the standby mode (the drum stops rotating) to protect the tape and the video heads. If the tape is stopped in the search mode for more than 8 minutes, the tape will advance in forward direction at the 1/30 normal speed. To set the unit into the desired mode (except the stop mode) press the appropriate button. To set the unit into the stop mode, press the STANDBY button.

Moisture condensation

If the moisture is condensed, the drum and the capstan motors stop and the cassette will be ejected. The AUTO OFF lamp on the front panel will light. Then the drum will begin rotating again. To operate the machine, wait until the AUTO OFF lamp will go off and about ten minutes will have passed.

1-5-3. Time Code Recording

The time code is recorded together with the video and audio signals. The time code generated by the built-in time code generator, the time code from an external time code generator or the playback time code of another VTR can be selected for recording.

Generation of the time code

The built-in time code generator has two modes of time code generation, REC RUN mode and FREE RUN mode.

REC RUN mode

The time code generator generates the time code only when the VTR is in the record mode. When the recording begins, the time code generation begins, and stops when the recording stops. To set the generator in the REC RUN mode, set the REC RUN/FREE RUN selector on the TC-28 board to REC RUN.

FREE RUN mode

The time code generator generates the time code continuously independent of the VTR operation mode. When the time code generator is preset to the standard time, the recording time will be recorded on the tape. To set the generator in the FREE RUN mode, set the REC RUN/FREE RUN selector to FREE RUN.

To record the time code generated by the built-in time code generator

To preset the generator to the desired time

1. Set the EXT/INT selector to INT.
2. Set the REC RUN/FREE RUN selector to the appropriate position.
3. Set REGEN/PRESET selector to PRESET.
4. Press the HOLD button. The HOLD lamp lights and the left most digit on the time counter display blinks.
5. Press the ADVANCE button to set the desired number at the blinking position.
6. Press the SHIFT button to move the blinking position to the right.
   Repeat steps 5 and 6 until the all digits are entered.
7. Press the PRESET button. The right most digit stops blinking.
   When the time code generator is in the FREE RUN mode, the generation of time code begins.
   When the time code generator is in the REC RUN mode, the time code will be generated when the VTR is in the record mode.

To preset to the time code generated by an external time code generator

1. Connect an external time code generator to the TIME CODE IN connector on the connector panel.
2. Set EXT/INT selector to EXT.
3. Set the REC RUN/FREE RUN selector to FREE RUN.
4. Set the REGEN/PRESET selector to PRESET.
5. Set the VTR in stop mode, and press the REC button. The built-in time code generator starts generating the time code synchronizing it with the output signal of the external time code generator. The time counter display shows the time code.
6. Press the STOP button.
7. Set the EXT/INT selector to INT. The built-in time code generator will continue to generate the time code after the external time code generator is disconnected.

- This method is convenient for setting the same time code on the time code generator of two or more BVW-40Ps.

To record the output signal of an external time code generator or the playback time code of another VTR

1. Connect the time code output connector on the external time code generator or another VTR to the TIME CODE IN connector on the connector panel.
2. Set the EXT/INT selector to EXT.
3. Set the REGEN/PRESET selector to the following position.
   To directly record the time code from the TIME CODE IN connector: PRESET
   To record the time code from the built-in time code generator which is synchronized with the time code connected to the TIME CODE IN connector: REGEN

To duplicate the time code

There are two methods to duplicate the time code as follows.

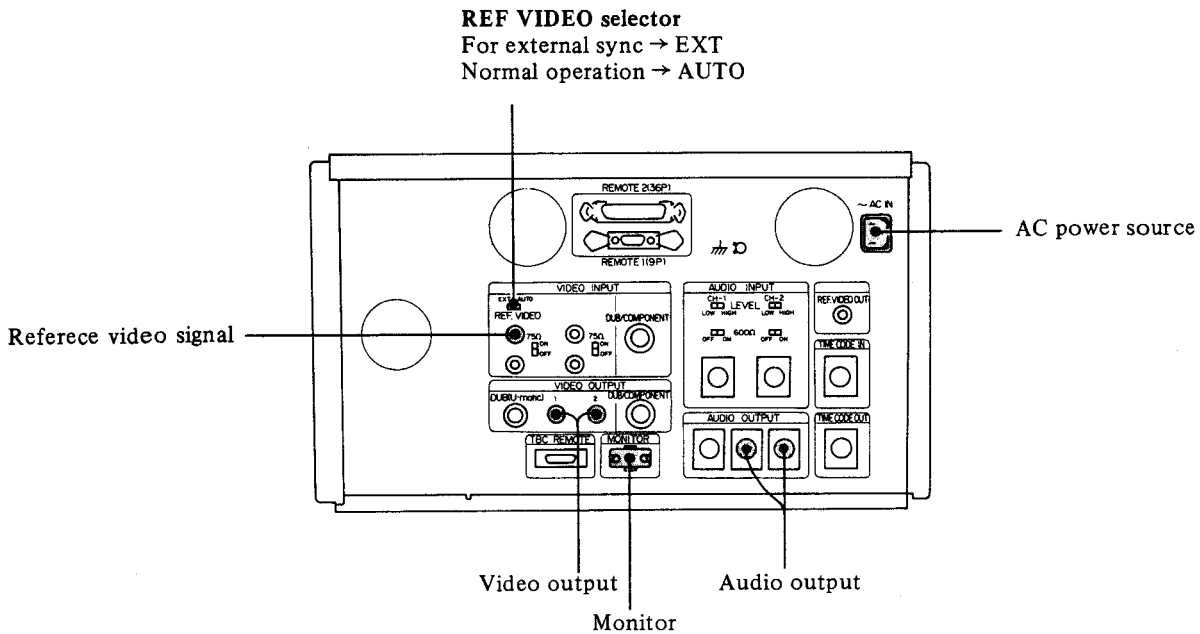
A) Directly recording the playback time code
B) Recording the time code from the built-in time code generator which is synchronized with the playback time code

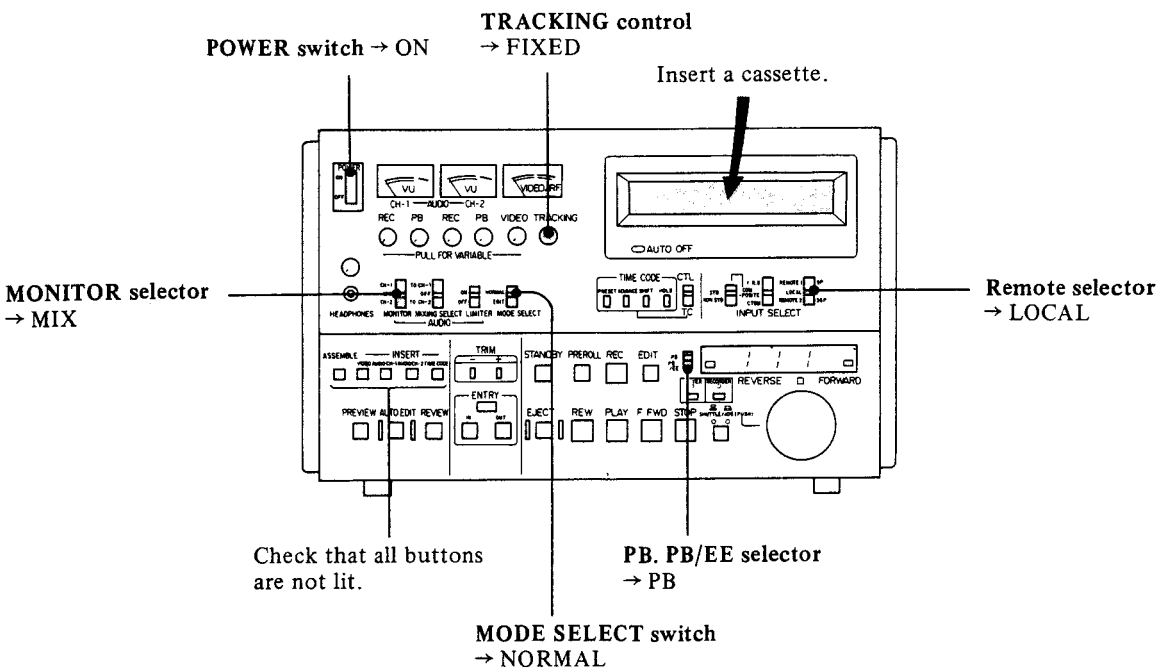
We recommend method B) because the signal distortion caused by dubbing is avoided.

1. Connect the time code output connector on the player to the TIME CODE IN connector on the connector panel.
2. Set the EXT/INT selector to EXT.
3. Set the REGEN/PRESET selector as follows.
   To directly record the playback time code: PRESET
   To record the time code from the built-in time code generator: REGEN
4. Set the player in playback mode and the recorder in record mode.

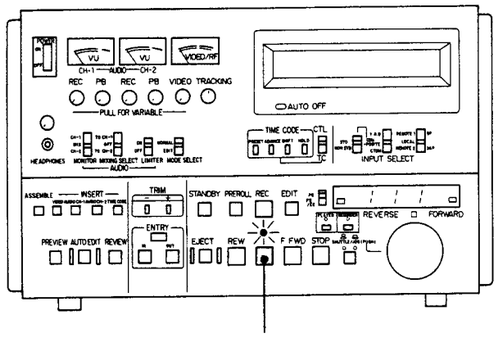
1-6. PLAYBACK

1-6-1. Preparations





1-6-2. Operation



Press the PLAY button, and playback will begin.
The servo will be locked for about 0.6 second and the SERVO lamp will light. During playback, the PLAY button and the SERVO lamp light.

To stop playback

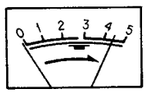
Press the STOP button.

Playback stops and the STOP button lights.

- If the tape reaches the end, it will automatically rewind to the beginning and stop.

Tracking adjustment

Normally, set the TRACKING control to FIXED.
If noise appears on the playback picture, turn the TRACKING control so that the pointer of the VIDEO/RF meter points as far to the right as possible.





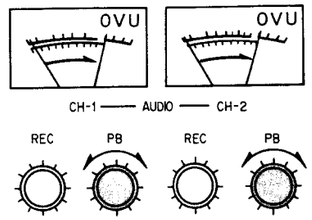
To adjust the audio playback level

Preset level

Keep the PB level controls in the pushed-in position. When the standard signal is played back, the signal level of +4 dBm* is obtained at the AUDIO OUTPUT connector (when it is terminated at 600 ohms).

Manual adjustment

Pull out the PB level controls and turn them so that the pointers of the VU meters read approximately 0 VU at the maximum deflection.



* The preset level can be changed within a range from 0 to +6 dB against +4 dBm. For details, refer to Section 2.

To monitor the playback video and audio

You can monitor the playback video and audio signal with the same method as recording.

1-6-3.Time Code Playback

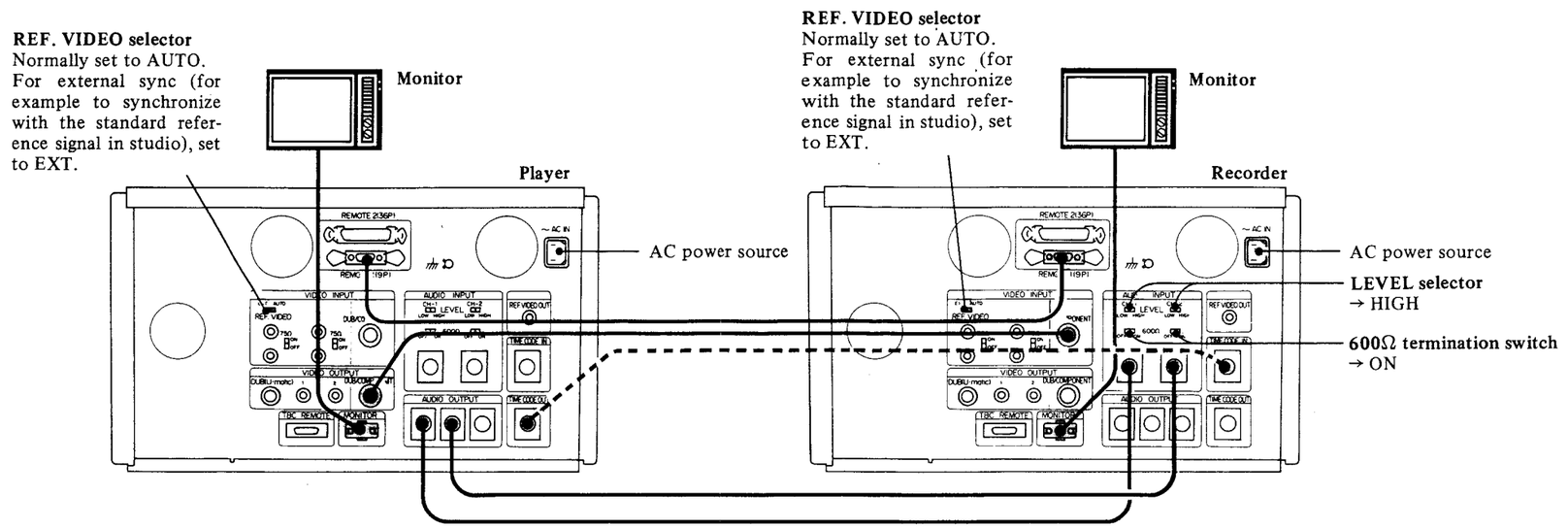
When playing back the tape on which the time code is recorded, the built-in time code reader reads the recorded time code, and the time code signal will then be supplied from the TIME CODE OUT connector on the connector panel.
The playback time code will be displayed on the time counter display if the CTL/TC selector is set to TC.

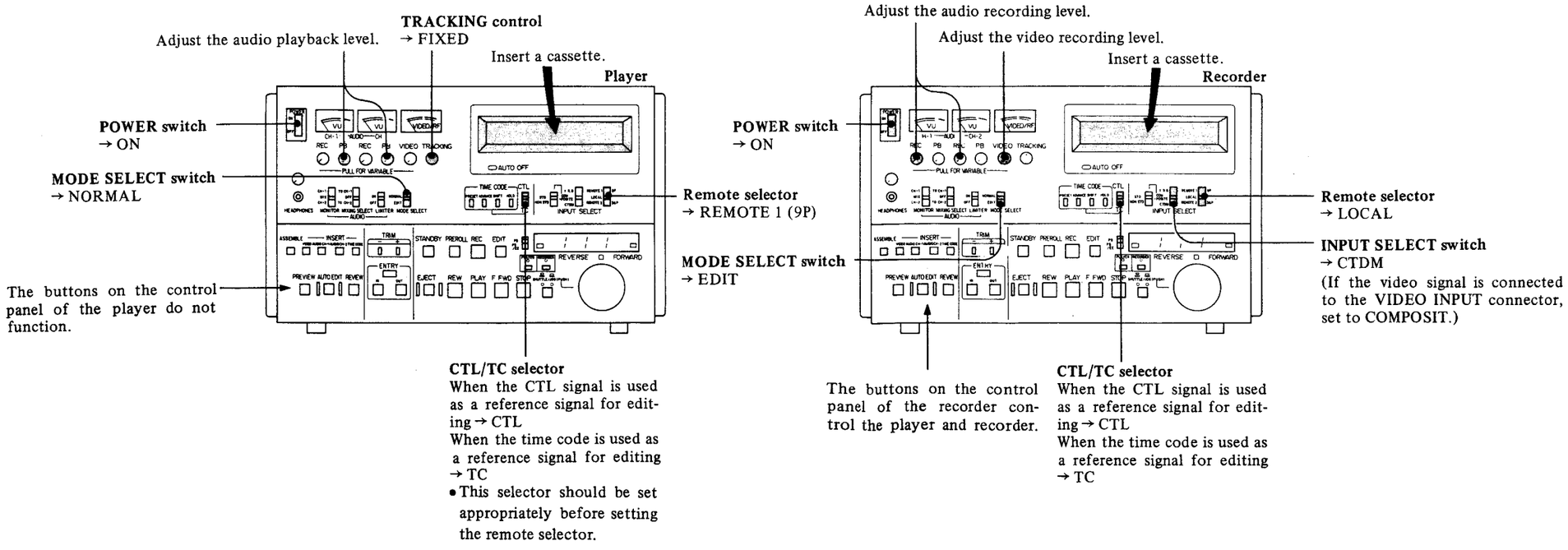
REGEN (regenerate) mode

When the REGEN/PRESET selector is set to REGEN, the EXT/INT selector is set to INT and the tape is played back in the normal playback mode, the built-in time code generator generates the time code which is synchronized with the playback time code. The generated time code is supplied to the TIME CODE OUT connector. To supply the playback time code to another VTR, this mode is recommended because distortion of the time code signal can be avoided.

1-7. EDITING

1-7-1. Preparations





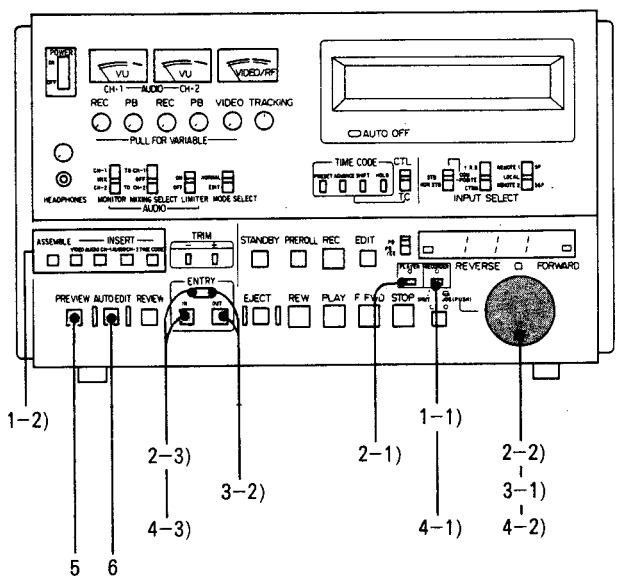
Reference signal for editing

To use the time code as a reference signal, set the CTL/TC selector to TC and to use the CTL signal, set to CTL. When setting the CTL/TC selector, be sure to set the remote selector to LOCAL. If the selector is set to REMOTE 1 or REMOTE 2, the CTL/TC selector cannot be reset.

- After the editing points have been entered, do not reset the CTL/TC selector until the editing has been completed.
- To use the time code as a reference signal, the time code should be recorded sequentially on the tape.
  If the time code is not in sequential, the editing cannot be performed correctly.
  It is not required that the recorded time code is consecutive. If the time code is not consecutive in the preroll period, the reference signal is automatically changed to the CTL signal and the editing can be performed.

When two BVW-40Ps are connected with the dubbing cable and the INPUT SELECT switch on the recorder is set to CTDM, the drum-advance OFF command is sent to the player, and the V-blanking of the playback signal on the player is shifted by 8H. If the player is used as an machine to send out the signal to the next stage, be sure to set the INPUT SELECT switch on the recorder to COMPOSITE or Y--R, B and keep the power of the recorder on.

1-7-2. Operation



1. Decide the editing mode.

1) Press the RECORDER button. The RECORDER lamp will light.
2) **For assemble editing**: Press the ASSEMBLE button and the ASSEMBLE button will light. In assemble editing, the time code will be recorded automatically. Be sure to preset the built-in time code generator. (See "1-5-3. Time Code Recording.")
   For insert editing: Press the INSERT buttons whose signal you want to insert and the pressed button(s) will light. If the time code is used as a reference signal for editing, it cannot be inserted.

2. Decide the IN point of the player.

1) Press the PLAYER button. The PLAYER lamp will light, and the IN and OUT buttons start blinking slowly.
2) Search for the IN point with the search dial.
3) Press the ENTRY and IN buttons simultaneously. The IN button will light and the digits displayed on the time counter display will be entered as the IN point.

- The first IN point should be decided at a point more than 5 seconds after the record start point on the tape.

3. Decide the OUT point of the player.

1) Search for the OUT point with the search dial.
2) Press the ENTRY and OUT buttons simultaneously. The OUT button will light and the digits displayed on the time counter display will be entered as the OUT point.

- The OUT point should be placed after the IN point. If the OUT point is placed before the IN point, the entered IN point is erased and the automatic editing will not be performed correctly.

4. Decide the IN point of the recorder.

1) Press the RECORDER button. The RECORDER lamp will light, and the IN button starts blinking slowly.
2) Search for the IN point with the search dial.
3) Press the ENTRY and IN buttons simultaneously. The IN button will light and the digits displayed on the time counter display will be entered as the IN point.

- When the OUT point has been entered on the player, the entry of the OUT point on the recorder is not necessary.

5. Press the PREVIEW button if you want to rehearse the editing.

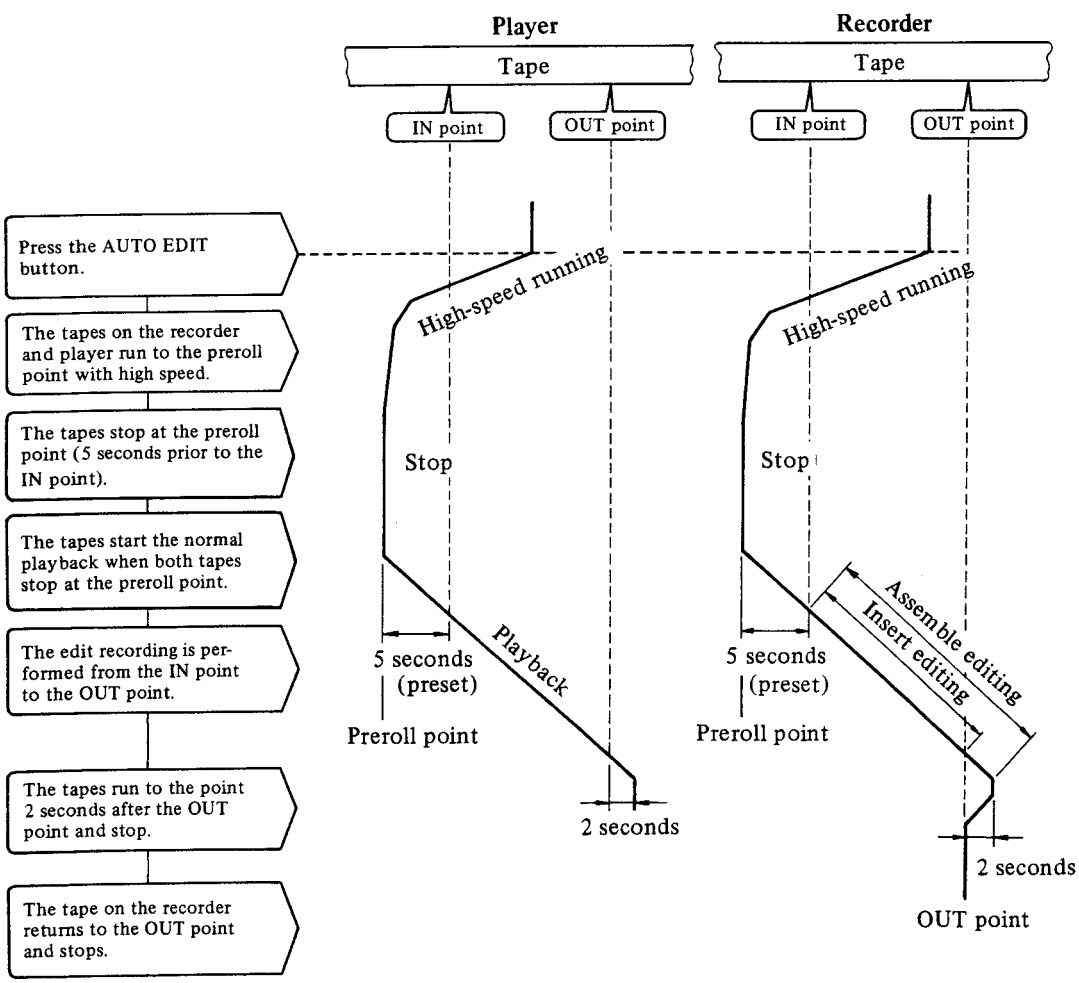
The REVIEW button will light, and the rehearsal of editing can be performed. Observe the recorder's monitor: the picture from the player will be displayed in E-to-E mode between the IN and OUT points. If necessary, trim the editing points and press the PREVIEW button again.

To stop the tape during previewing, press the STOP button. Press the PREROLL button to rewind the tape to the preroll point.

To start auto editing during previewing, press the AUTO EDIT button. The tape rewinds to the preroll point and the edit-recording will begin.

6. After deciding the editing points, press the AUTO EDIT button.

The edit-recording will be performed as shown below.



To review the editing result

After edit-recording, press the REVIEW button and the editing result can be seen on the recorder's monitor. After the review, the tape stops at the OUT point.
To stop the review, press the STOP button.

To monitor the edit recording

You can monitor the recording from 5 seconds prior to the IN point to 2 seconds after the OUT point on the recorder's monitor. In insert editing, if some CTL signals are missed on the tape on the recorder, the playback picture of the recorder will appear on the monitor indicating that the edit recording is not made at that portion.

To stop edit recording

To stop edit recording before the OUT point, press the OUT and ENTRY buttons simultaneously.

When the edit recording is finished

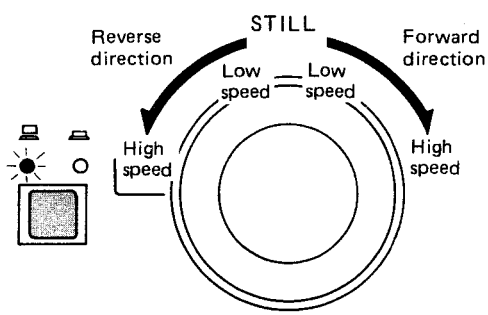
When the edit recording of one scene is finished, search for and enter the IN and OUT points for the next scene, as described on the previous pages. You can make the OUT point of one scene the next IN point for the recorder.

To search for an editing point

Turn the search dial right and left to search for an editing point. When the RECORDER lamp lights, the point on the recorder will be searched for, and when the PLAYER lamp lights, the point on the player will be searched for. Decide the editing point by monitoring the picture on each monitor. If the SHUTTLE lamp is not lit, press the search dial in.

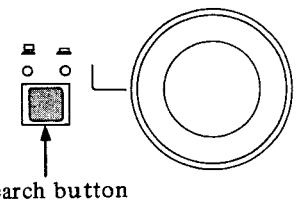
1. Set the VTR in the shuttle mode (the SHUTTLE lamp is lit), and search for the desired point by turning the search dial.
   When the dial is turned beyond the click position, 10 times the normal playback speed can be obtained. When the VTR enters the 10 times normal speed playback, the picture is stopped or distorted for a moment.

- After the power is turned on, be sure to set the dial to the center position, before it is used.



2. Press the dial in to set the VTR in the jog mode (the JOG lamp will light).
3. Turn the dial. The playback speed depends on the speed with which the dial is turned. Decide the editing point precisely.

How to use a search button



While operating this unit, the VTR will enter the search mode simply by turning the search dial, and the search button is not necessarily required. However the following uses are possible.

To start playback at a desired speed

1. Turn the search dial in the shuttle mode and set at the position of the desired playback speed.
2. Press the PLAY or STOP button.
3. Press the search button, and the playback at the speed set in step 1 will begin.

To prevent accidental entry into the search mode

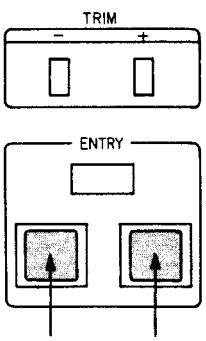
The search dial can be set to be activated only when the search button is pressed. Then the VTR is prevented from accidentally entering into the search mode. (For details, see "SEARCH DIAL switch" in Section 2.)

To check the IN and OUT points

When checking the entered IN and OUT points, they will be displayed on the time counter display.

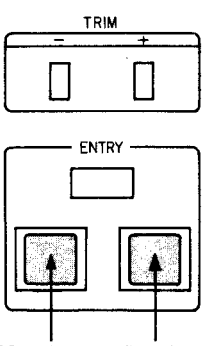
To check the IN and OUT points on the player

Press the PLAYER button, and then the IN or OUT button and hold it down. The IN or OUT point will be displayed while the corresponding button is pressed.



To check the IN and OUT points on the recorder

Press the RECORDER button, and then the IN or OUT button and hold it down. The IN or OUT point will be displayed while the corresponding button is pressed.



To locate the IN and OUT points

The IN and OUT points on the recorder and the player can be easily located.

Press the RECORDER or PLAYER button, and press the PREROLL button and IN or OUT buttons simultaneously. When the IN button is pressed, the tape runs to the IN point and stops: When the OUT button is pressed, the tape runs to the OUT point and stops.

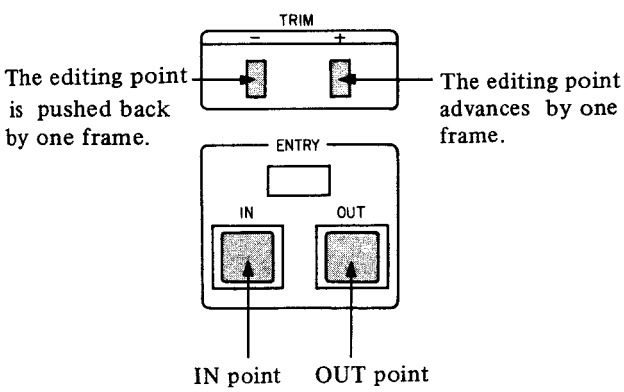
To trim the editing point

There are two methods to trim the entered editing point: Trimming the point by one frame or entering a new editing point.

To trim frame by frame

The IN and OUT points can be trimmed by one frame.

1. Press the IN or OUT button to display the point to be trimmed on the time counter display.
2. While pressing the IN or OUT button, press the TRIM + or TRIM – button.
   Every time the TRIM + button is pressed, the editing point advances by one frame and every time the TRIM – button is pressed, the editing point is pushed back by one frame.



To enter a new editing point

Search for the new editing point and press the ENTRY button and the IN or OUT button simultaneously. Then the new point will be entered as the IN or OUT point and the previous point will be erased.

Time counter display



The time counter display shows the tape running time with the normal playback speed when the CTL/TC selector is set to CTL. When the RESET button is pressed, the display shows "0:00:00:00", and when the tape runs in the reverse direction from "0:00:00:00", a minus sign "–" will be displayed to the left of the digits. In the CTL mode, the CTL signals recorded on the tape are counted. Therefore, if the tape lacks the CTL signals, the digits on the display will not indicate the correct time. If fast forward or rewind is repeated several times, correct indication of time is impossible. When a new tape is played back, the digits will not change because the CTL signals have not been recorded.

When the CTL/TC selector is set to TC, the playback time code or the time code generated by the built-in time code generator will be shown on the display.

When the RECORDER lamp is lit, the tape position on the recorder is shown and when the PLAYER lamp is lit, the tape position on the player is shown.

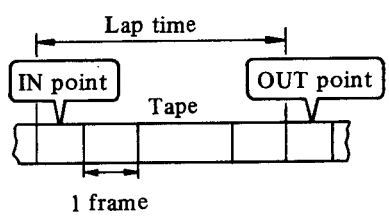
When the IN or OUT button is pressed after entering the IN and OUT points, the IN or OUT point will be shown on the display.

When the RESET button is pressed after entering the editing point, the entered points will be erased. Never press the RESET button before the edit-recording has been completed.

The RESET button is effective only in the CTL mode.

To show the lap time

When the LAP button is pressed after entering the IN and OUT points, the lap time (period between the IN and OUT points) will be displayed on the time counter display while the button is pressed. When the RECORDER lamp is lit, the lap time on the recorder is displayed and when the PLAYER lamp is lit, the lap time on the player is displayed. When the OUT point is entered on the player, the lap time will be transferred to the recorder after the preview or auto editing is performed.



If the LAP button is pressed without entering the editing point, the following lap time will be displayed.

When neither of the IN and OUT points have been entered, the lap time of the previous editing will be displayed.

When only the IN point has been entered, the period from the IN point to the present tape position will be displayed.

When only the OUT point has been entered, the lap time of the previous editing will be displayed.

Blinking of the lamps

Press the buttons whose lamps are blinking, and the editing can be completed. The blinking and lighting of lamps are as follows.

- The ASSEMBLE and INSERT (VIDEO, AUDIO CH-1, AUDIO CH-2, TIME CODE) lamps blink indicating that the editing mode is to be determined by pressing the appropriate button.
  The pressed buttons light indicating that the editing mode has been determined.
- The IN and/or OUT lamp(s) for the player and recorder blink indicating that the editing point(s) must be entered.
  The IN and OUT lamps light when the IN and OUT points have been entered but the editing has not been performed.
- The PREVIEW and AUTO EDIT lamps blink indicating that you can proceed either to the preview or the auto edit operation.
  The PREVIEW or AUTO EDIT lamp lights to indicate that the recorder is in one of these modes.

To change the preroll time

The preroll time is set to 5 seconds, but it can be changed, if necessary, to 0, 1, 2, 3, 5, 7, 10 or 15 seconds. When the preroll time is changed, the recording period of the CTL signals before the IN point or the period between the record-start point and the first IN-point should be changed according to the new preroll time. The preroll time set on the recorder will be selected for both the player and recorder. For details, see Section 2.

1-7-3. Parallel Operation of the Player and the Recorder

The search, entry, playback, fast forward or rewind can be controlled by the player or recorder while one of them is in use so that you can reduce the editing period.

Method 1

Set the remote selector on the player to LOCAL. Then the control panel on the recorder and player will control each machine.

Method 2

Set the remote selector on the player to REMOTE 1, and use the control panel on the recorder as follows.

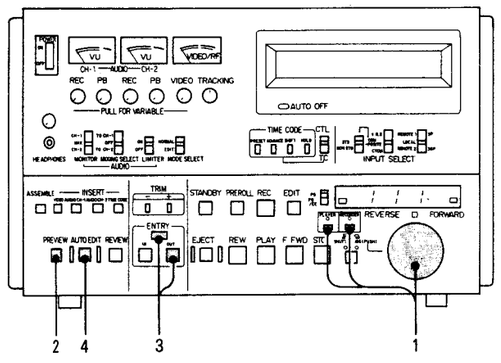
1. Press the RECORDER button and the RECORDER lamp will light. Operate the recorder with the buttons on the control panel.
2. Press the PLAYER button and the PLAYER lamp will light. The following buttons will control the player, and the time counter display shows the tape position on the player.
   Search dial, search button, PREROLL, PLAY, F FWD, REW, STOP, STANDBY, EJECT, ENTRY IN, ENTRY OUT, TRIM +, TRIM –, LAP, RESET
   The recorder keeps the operation in step 1.
3. Press the RECORDER button to control the recorder again.

- If the control panel is detached and connected with an optional BK-802 remote control cable, the recorder and player will be remotely controlled.

1-7-4. Quick Editing

You can save time by entering the IN and OUT points in the preview mode.

1. Locate the desired IN points for the player and recorder by using the search dial, and stop the tape.
2. Press the PREVIEW button. The points obtained in step 1 will be memorized as the IN points for the player and recorder (the IN button will light), and the preview will start.
3. Watch the recorder's monitor and at the point where the scene is to end, press the OUT and ENTRY buttons simultaneously on the player or the recorder. This point will be memorized as the OUT point. The tape will run for 2 more seconds, as a post roll and return to the preroll point.
- You may also use the search dial to locate the OUT point accurately.
- If necessary, preview the tape again, and trim the IN and/or OUT points.
4. Press the AUTO EDIT button. The edit recording will be made.

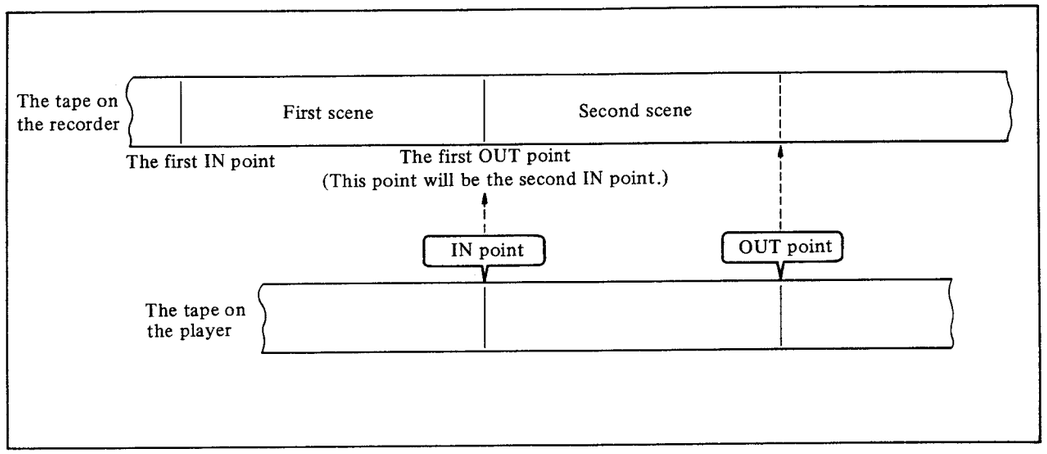


To edit even more quickly

Press the AUTO EDIT button in step 2 of the above procedure, and the edit recording will begin. The point in step 1 will be the IN point and the point where the OUT and ENTRY buttons are pressed will be the OUT point.

1-7-5. Continuous Editing (Butt Edit)

When you have finished recording from IN point to OUT point, the recorder returns to the OUT point and stops. You can make this OUT point as the next IN point for the recorder, and perform the following editing only by entering the IN and OUT points on the player and pressing the AUTO EDIT button. The entry of the OUT point on the recorder is also omitted. In this case, press the ENTRY and OUT buttons simultaneously to end the editing.
This technique is called "Butt edit".



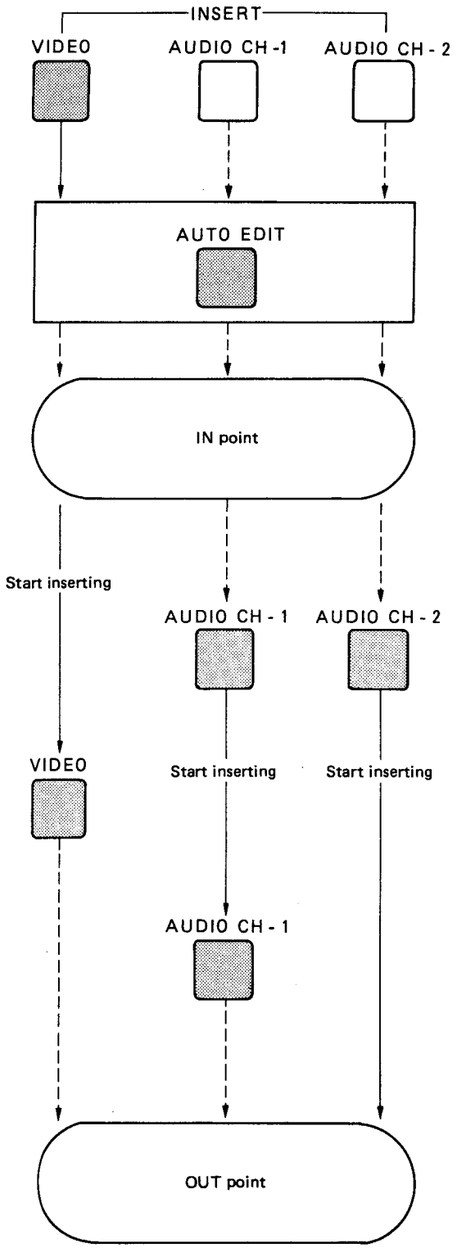
1-7-6. Split Edit

In the insert mode, you can start and stop the edit recording of the video, audio channel 1 and audio channel 2 separately.

1. Select the desired input signal with any or all of the INSERT buttons.
2. Press the AUTO EDIT button to start automatic edit recording.
3. At the point where the edit recording of the video or audio is to stop, press the appropriate INSERT button (s). The corresponding lamp(s) will light.
   You may cut in or cut out the desired signal(s) at any point by pressing the INSERT button(s). Even if all the signals are cut out, the desired signal(s) can be cut in simply by pressing the INSERT button(s).
4. When the OUT point has been entered, the recording will stop automatically. When the OUT point has not been entered, press the ENTRY and OUT buttons to stop edit recording.

In the manual insert mode, you can split-edit in the same way. To stop edit recording, press the PLAY button.

Example of the split edit



The buttons to be pressed

The video signal is selected for the input signal.

Edit recording of video signal starts.

Edit recording of audio ch-1 and ch-2 signal starts.

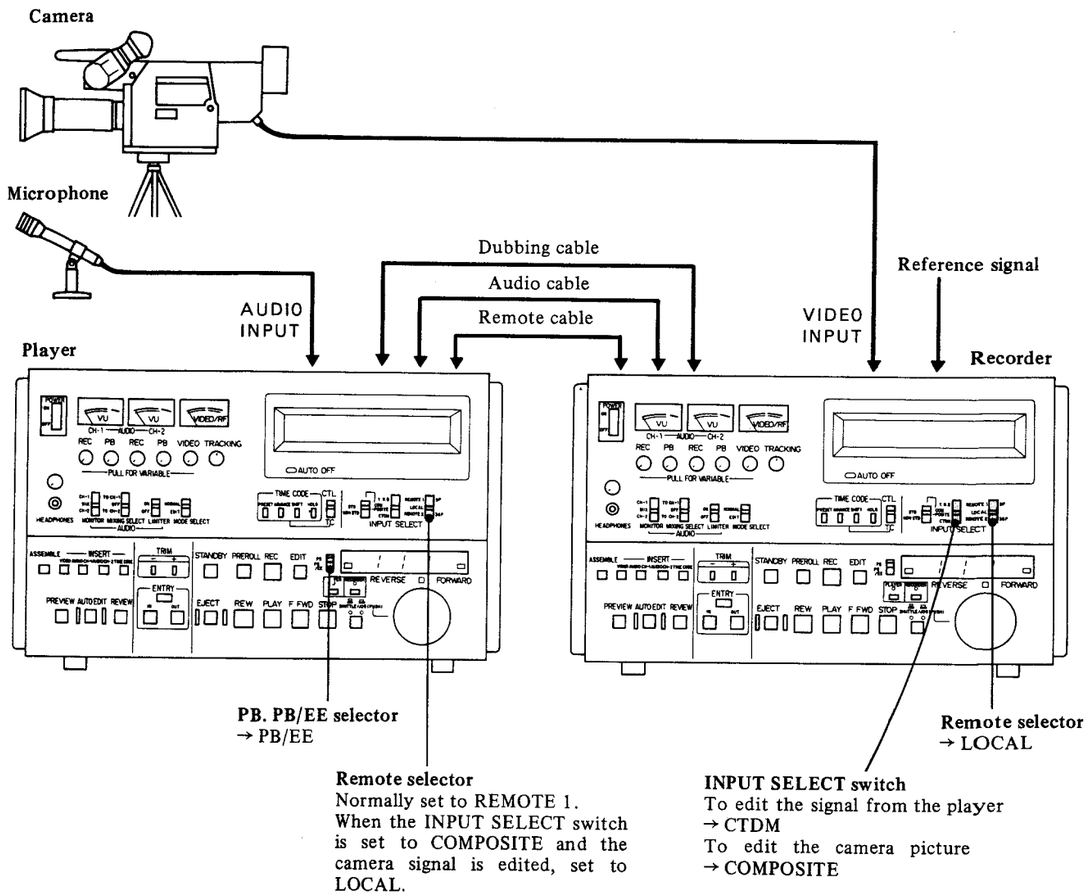
Recording of the video signal ends.

Recording of the audio ch-1 signal ends.

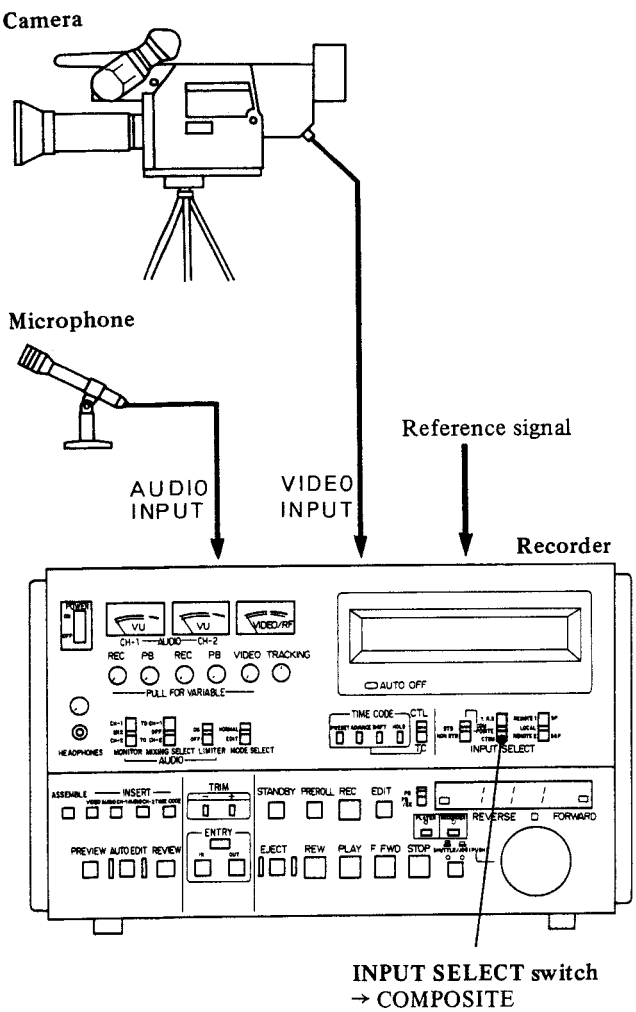
Edit-recording ends.

1-7-7. To Edit the Camera Picture

To edit the camera picture during the tape-to-tape editing



To edit the camera picture only



Operation

Set the player in the stop mode.

For assemble editing

Enter the IN point of the recorder, and press the AUTO EDIT button. To stop editing press the ENTRY and OUT buttons simultaneously.

For insert editing

Enter the IN and OUT points of the recorder, and press the AUTO EDIT button. When the OUT point has not been entered, press the ENTRY and OUT buttons simultaneously to stop the editing.

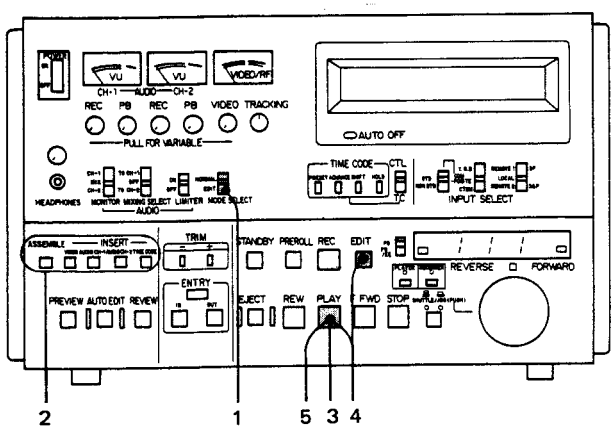
Note on the reference signal

The reference signal connected to the REF. VIDEO IN connector must be synchronized with the genlock signal connected to the camera. If the synchronized reference signal cannot be supplied to the BVW-40P, make the bridge connection of the VIDEO INPUT connector and the REF. VIDEO IN connector so that the signal from the camera is connected to the REF. VIDEO IN connector.

1-7-8. Manual Editing

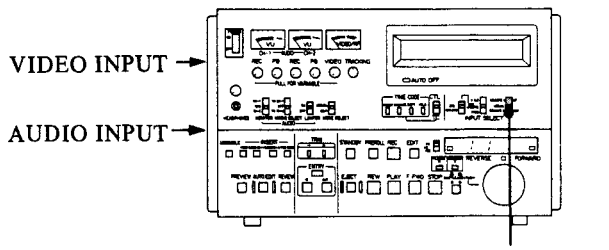
The connections are the same as those for the automatic editing.

1. Set the MODE SELECT switch to EDIT.
2. Select the editing mode: assemble or insert.
3. Play back the tapes of the recorder and player.
4. At the point where the scene is to begin, press the PLAY and EDIT buttons on the recorder simultaneously. The edit recording will begin at the point the buttons have been pressed.
5. At the point where the scene is to end, press the PLAY button on the recorder. The edit recording will stop and the recorder will enter the playback mode.



- If the editing is started from the stop mode or stopped by the STOP button, the picture will be unstable at the IN or OUT point.
- To obtain a perfectly stable playback picture, start the playback at least 2 seconds prior to the IN point.

1-7-9. Editing Using One BVW-40P



With this machine, if you connect a video and audio input signal, editing can be made as described on the previous pages.

Notes

- Set the remote selector to LOCAL.
- The entry of the IN and OUT points and the AUTO EDIT, PREVIEW and TRIM buttons can be proceeded with this machine. Operate the input video and audio signal source separately.

1-8. NOTE ON USE OF AN EDITING CONTROL UNIT

When the BVW-40P is controlled with an editing control unit, set the editing control unit so that the CUT-IN and CUT-OUT command is output 3 frames before the editing point.

- On the BVE-500/500A series unit, this setting cannot be made.

1-9. HEAD CLEANING

Clean the video heads and the audio heads with the HG-5CL video head cleaning cassette (optional). For details, refer to the instructions which come with the cleaning cassette.

- As the head drum rotates even in the stop mode, be sure to eject the cleaning cassette after use.

1-10. SPECIFICATIONS

Mechanical

Weight: 38.7 kg (85 lb 5 oz)

Dimensions: 454 x 264 x 550 mm (w/h/d)
(17 7/8 x 10 1/2 x 21 3/4 inches)

Operating position
Horizontal (within 30°)

Tape transport mechanism
Betacam system

Video cassette
HG-20 cassette (1/2-inch cassette for Beta format) and equivalent

Tape speed: 101.5 mm/s

Record/playback time
20 minutes maximum with an HG-20 cassette

Wow/flutter: Less than 0.2 % (DIN)

Fast forward/rewind time
Less than 90 seconds with an HG-20 cassette

Search speed: Shuttle: Still, 1/30, 1/10, 1/5, 1/2, 1, 2, 5 and 10 times normal in forward and reverse directions
Jog: Still to 1 in forward and reverse directions

Connectors:
AC IN: 3-wire parallel ground
VIDEO INPUT: BNC connectors
VIDEO OUTPUT 1/2: BNC connectors
AUDIO INPUT CH-1/CH-2: XLR female connectors
AUDIO OUTPUT CH-1/CH-2/MONITOR: XLR male connectors
DUB/COMPONENT INPUT: 12-pin male connector
DUB/COMPONENT OUTPUT: 12-pin female connector
DUB(U-matic) OUTPUT: 7-pin female connector
REMOTE 1 (9P): 9-pin connector
REMOTE 2 (36P): 36-pin connector
MONITOR: 8-pin connector
TBC REMOTE: 15-pin male connector
REF. VIDEO INPUT: BNC connectors
REF. VIDEO OUT: BNC connector
TIME CODE IN: XLR female connector
TIME CODE OUT: XLR male connector
HEADPHONES: JM-60 stereo phone jack

Operating termperature
5°C to 40°C (41°F to 104°F)

Storage temperature
–20°C to +60°C (–4°F to +140°F)

Electrical

Power requirements
90V to 265V AC, 48 to 64 Hz

Power consumption
280W

Video

Video recording system
Luminance: FM
Chrominance: Compressed time division multiplex FM

Bandwidth: Luminance: 25Hz–4.0MHz $^{+0.5dB}_{-6.0dB}$

Chrominance: R–Y 25Hz–1.5MHz $^{+0.5dB}_{-3.0dB}$

B–Y 25Hz–1.5MHz $^{+0.5dB}_{-3.0dB}$

Signal to noise ratio
Luminance: More than 46dB
AM: More than 49dB
PM: More than 49dB

K-factor (2T pulse)
Less than 3%

DG: Less than 3%

DP: Less than 3°

Y/C delay: Less than 20 ns

Input:
REF. VIDEO INPUT
1.0V(p-p) ±0.3V, 75 ohms ON/OFF
VIDEO INPUT
Composite video, 1.0V(p-p), 75 ohms ON/OFF
DUB/COMPONENT INPUT
Luminance: 1.0V(p-p), 75 ohms, sync negative
Chrominance: R-Y 0.7V(p-p), 75 ohms
B-Y 0.7V(p-p), 75 ohms
AUDIO INPUT CH-1/CH-2
LOW: –60dB, 3k ohms, balanced
HIGH: +4dB, 600 ohms/10k ohms, balanced
TIME CODE INPUT
0.5V–18V(p-p), 600 ohms, balanced

Output:
VIDEO OUTPUT 1
Composite video, 1.0V(p-p), 75 ohms, sync negative
VIDEO OUTPUT 2
Composite video, 1.0V(p-p), 75 ohms, sync negative
Non composite video, 0.7V(p-p), 75 ohms

DUB OUT (U-matic)
Luminance: 0.5V(p-p) (75 ohm load), sync negative
Chrominance: 0.5V(p-p) (75 ohm load, SC low-range conversion)
DUB/COMPONENT OUTPUT
Luminance: 1.0V(p-p), 75 ohms, sync negative
Chrominance: R-Y 0.7V(p-p), 75 ohms
B-Y 0.7V(p-p), 75 ohms

Editing functions
INSERT (VIDEO, AUDIO CH-1, AUDIO CH-2, TIME CODE), ASSEMBLE, AUTO EDIT, MANUAL EDIT, PREVIEW, REVIEW, TRIM, PREROLL

Audio

Frequency response
50Hz–15kHz ± 3.0dB
Signal to noise ratio
More than 50 dB (at 3% distortion level, without the audio NR system)
Distortion Less than 2 % (1 kHz reference level)
Input AUDIO INPUT CH-1/CH-2
LOW: –60dB, 3k ohms, balanced
HIGH: +4dB, 10k ohms, balanced
Output AUDIO OUTPUT CH-1/CH-2/MONITOR
+4 dB, low impedance, balanced (600 ohm load)
Time code +4 dBm (600 ohm), balanced

Processor adjustment range

Video level ±3dB
Chroma level ±3dB
Black level 0 to +15 IRE
System SC phase
360°(p-p)
System sync phase
$^{+3}_{-1}\mu s$
Y/C delay ±50ns

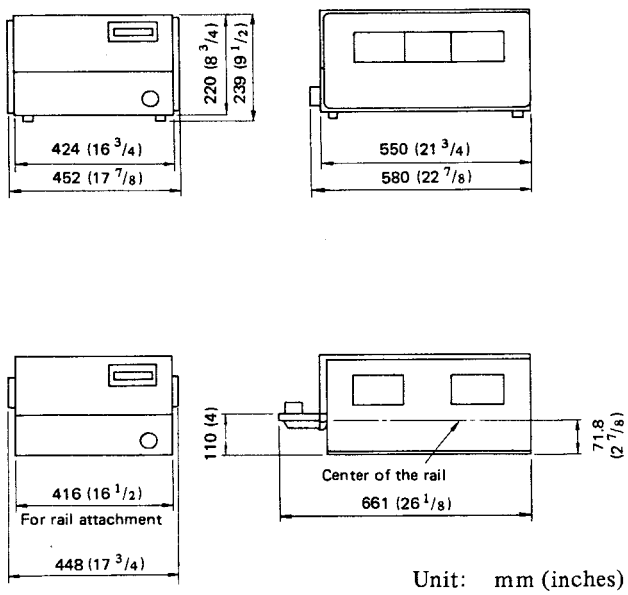
Accessories supplied

AC power cord (1)
RCC-5G 9-pin remote control cable (1)
12-pin dubbing cable (1)
Extension board A (1)
Extension board B (1)
Extension board C (1)
Operation and maintenance manual (1)

Optional accessories

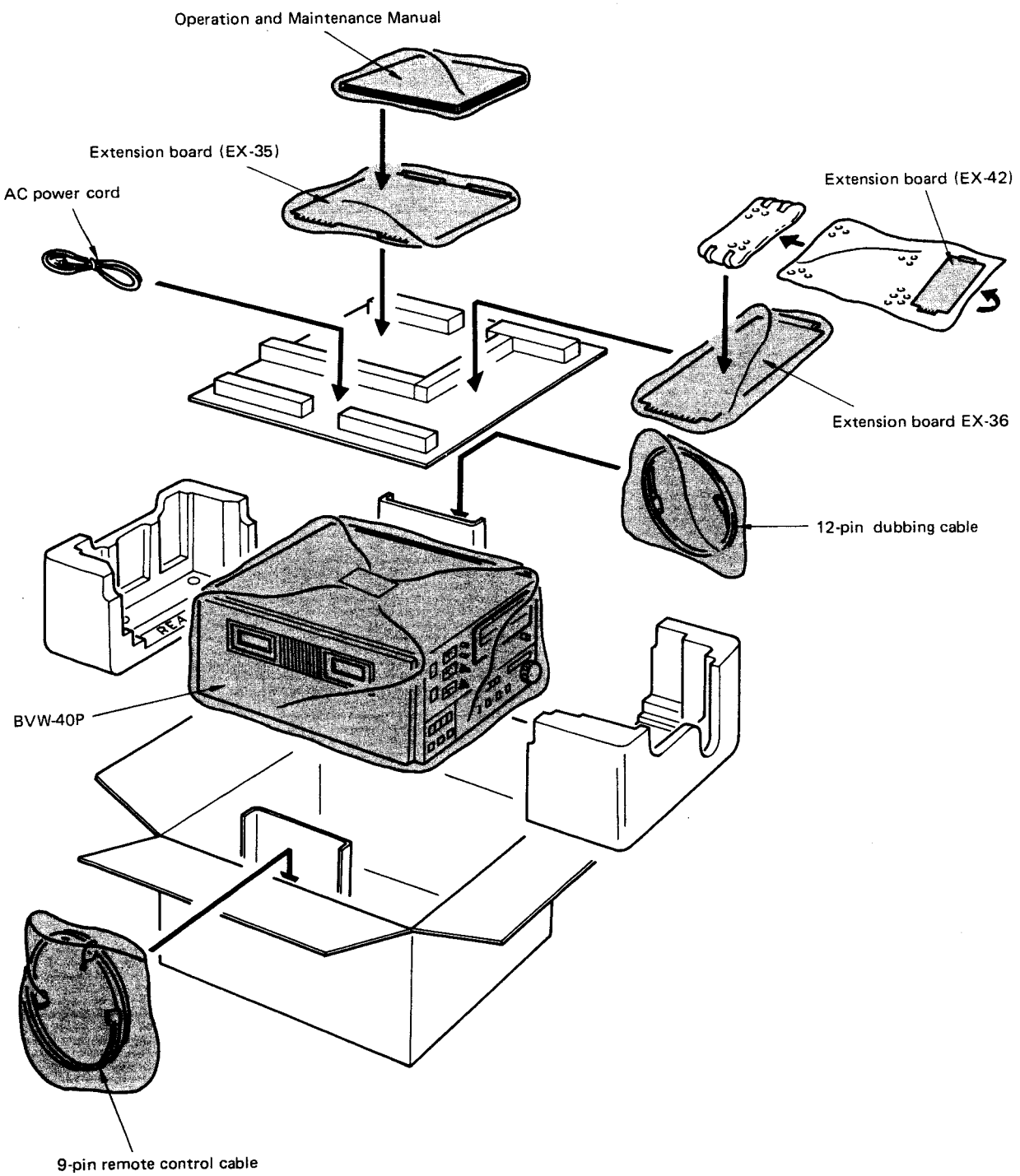
Rack mount kit BK-805
Cleaning cassette HG-5CL

Dimensions



Unit: mm (inches)

1-11. REPACKING FOR SHIPMENT



TEIL 1
BETRIEB

Der BVW-40P ist ein Aufnahme- und Wiedergabe-Gerät für 1/2-Zoll-Videocassetten, das nach dem neuentwickelten Betacam-Format arbeitet. Bei Verwendung von zwei BVW-40P oder von einem BVW-40P zusammen mit einem anderen Videorecorder (z.B BVW-10P, BVU-800P, BVU-820P, BVH-2000PS usw.) ist ein elektronisches Schneiden möglich.

1-1. BESONDERE MERKMALE

Hochqualitatives Bild
Obwohl in diesem neuentwickelten Videorecorder der Betacam-Serie nur ein 1/2-Zoll-Band verwendet wird, ist die Bildqualität außerordentlich hoch und steht der eines Videorecorders mit 1-Zoll-Band kaum nach.

Bedienung an der Vorderseite
Alle Bedienungsvorgänge einschließlich Einlegen und Herausnehmen der Cassette können am vorderen Bedienungspult, das je nach Anforderungen um bis zu 90° (in sechs Stufen) geschwenkt werden kann, ausgeführt werden. Zwecks Fernbedienung kann das Bedienungspult auch abgenommen werden, wobei der Anschluß dann über das als Sonderzubehör lieferbare Fernbedienungskabel BK-802 erfolgt.

Fernbedienung
Bei Verwendung von zwei BVW-40P wird das Wiedergabe-Gerät vom vorderen Bedienungspult des Aufnahme-Geräts aus bedient.

Schnitt-Funktionen
Bei Verwendung von zwei BVW-40P ist wahlweise manueller oder automatischer Einfügschnitt- oder Anfügschnitt-Betrieb möglich. Verschiedene Funktionen wie Eingabe von Schnittpunkten, Schnittpunktkorrektur, Vorshau und Rückschau erleichtern den Schnittbetrieb. Bei Aufügschnitt-Betrieb können Video-, Tonkanal-1-, Tonkanal-2- und Zeitcode-Signale gleichzeitig geschnitten werden. Bei Einfügschnitt-Betrieb können Video-, Tonkanal-1-, Tonkanal-2- und Zeitcode-Signale unabhängig geschnitten werden.

Schneller Zugriff zu den Schnittpunkten
Die Such-Funktion mit erkennbarem Bild im Shuttle-Betrieb (Wiedergabe-Geschwindigkeit kann in 16 Schritten von 1/30 bis 10 facher Normalgeschwindigkeit in Vorwärts- und Rückwärtsrichtung geändert werden) und Jog-Betrieb (Bild ändert sich entsprechend der Drehung am Suchlaufknopf) ermöglichen dem Bedienpersonal ein schnelles Auffinden des Schnittpunktes. In einem Bereich von −5 bis +5facher Normalgeschwindigkeit ist ein Farbbild sichtbar.

Automatisches/manuelles Video-Aufnahmesystem
Die Video-Aufnahmepegeleinstellung kann wahlweise automatisch oder manuell erfolgen.

Audio-System
Die Pegel für Ton-Aufnahme und -Wiedergabe können getrennt eingestellt werden. Gegebenenfalls kann ein Begrenzer zugeschaltet werden, um auch Signale mit plötzlichen starken Pegelspitzen verzerrungsfrei aufnehmen zu können. Weiterhin ist auch ein Mischen der Tonkanal-1- und Tonkanal-2-Signale möglich.

Zusammenschaltung mit anderem Video-Aufnahme- und Video-Wiedergabe-Gerät
Der BVW-40P kann direkt an andere Videorecorder wie z.B. BVW-10P, BVU-800P, BVU-820P, BVH-2000PS angeschlossen und dann von diesen aus fernbedient werden.
Auch Schnittbetrieb mit einer Schnitt-Steuereinheit der BVE-Serie ist möglich.

Eingebauter Zeitcode-Generator/Leser
Ein eingebauter Zeitcode-Generator ermöglicht gleichzeitiges Aufnehmen des Zeitcodes während des Betriebs. Weiterhin ist mit dem eingebauten Zeitcode-Leser ein Lesen und Wiedergeben des aufgezeichneten Zeitcodes möglich.

Getrennte Zeitcode-Spur
Die Zeitcode-Spur ist von der Video-Spur getrennt, so daß ein getrenntes Aufnehmen und Löschen des Zeitcodes möglich ist.

Direktantrieb mit Gleichstrommotoren
Schneller Zugriff zu den Schnittpunkten wird durch getrennte Gleichstrommotoren für Kopftrommel, Capstan, Abwickel- und Aufwickelspulen gewährleistet. Ein Servo-System sorgt für präzise Einhaltung der Bandspannung.

Digitaler Zeitzähler
Der Zeitzähler zählt die CTL-Signale und zeigt wahlweise den Zeitcode oder die bereits verstrichene Bandmenge an, so daß ein präzises Auffinden der Schnittpunkte möglich ist.

Schnitt/Überspiel-Anschlüsse
Bei Verwendung von zwei BVW-40P bzw. von einem BVW-40P und einem BVW-10P ermöglichen der Überspiel-Eingang und -Ausgang für Videorecorder der Betacam-Serie ein Schneiden und Überspielen von Videosignalen mit nur äußerst geringer Qualtitätsminderung.

Ton-Rauschverminderungssystem
Die Ton-Aufnahme und -Wiedergabe kann wahlweise mit dem neuentwickelten Dolby* C Rauschverminderungssystem durchgeführt werden.

Automatische Rückspul-/Stopp-Funktion
Am Ende spult das Band automatisch zum Anfang zurück (automatisches Rückspulen).
Am Anfang stoppt das Band automatisch (automatische Stopp-Funktion).

Eingebauter Time-Base-Korrektor (TBC)
Der eingebaute TBC sogt für ein stabiles Wiedergabebild.

Steckbare Leiterplatten
Die steckbaren Leiterplatten erleichtern Service- und Wartungsarbeiten. Sie sind durch einfaches Abnehmen der oberen Abdeckung zugänglich.

Montagemöglichkeit in einem 19-Zoll Normgestell
Der BVW-40P kann in einem 19-Zoll EIA-Normgestell montiert werden. Siehe dazu Abschnitt 2.

*„Dolby“ und das Doppel-D-Symbol sind Warenzeichen der Dolby Laboratories Licensing Corporation. Das Rauschverminderungssystem wird unter Lizenz der Dolby Laboratories Licensing Corporation hergestellt.

1-2. LAGE UND FUNKTION DER TEILE UND REGLER

1-2-1. Bedienungspult

Oberes Bedienungspult



① **Netzschalter [POWER]**
Zum Einschalten auf ON stellen. Die Instrumente und die Zeitzähler-Anzeige leuchten dann auf.

② **Kopfhörerbuchse (Stereo-Klinkenbuchse) und Lautstärkeregler [HEADPHONES]**
Zum Anschluß eines Stereo-Kopfhörers von 8 Ohm. Beim Aufnehmen, Schneiden oder Wiedergeben kann das Tonsignal dann mitgehört werden. Die Kopfhörer-Lautstärke wird am Lautstärkeregler eingestellt.

③ **VU-Meter**
Zeigen den Ton-Eingangspegel an, wenn sich das Gerät im Aufnahme- oder E-zu-E-Betrieb befindet und den Ton-Ausgangspegel, wenn es sich im Wiedergabe-Betrieb befindet.

④ **Aufnahme-Pegelregler [REC]**
Zum manuellen Einstellen des Aufnahmepegels ziehen Sie diese Regler heraus, wenn sich das Gerät im E-zu-E-Betrieb befindet und stellen Sie sie so ein, daß die VU-Meter ③ bis maximal 0 VU ausschlagen.
Sind die Regler hineingedrückt, erhält man bei einem Eingangspegel von +4 dBm (werkseitig voreingesteller Pegel) automatisch einen Aufnahmepegel von 0 VU. (Zum Ändern des voreingestellten Pegels siehe Abschnitt 2.)

⑤ **Wiedergabe-Pegelregler [PB]**
Zum manuellen Einstellen des Wiedergabepegels ziehen Sie diese Regler heraus, wenn sich das Gerät im Wiedergabe-Betrieb befindet und stellen Sie sie dann so ein, daß die VU-Meter ③ bis maximal 0 VU ausschlagen.
Sind die Regler hineingedrückt, erhält man automatisch den werkseitig voreingestellten Pegel (+4 dBm Eingang bei 600-Ohm-Abschluß). (Zum Ändern des voreingestellten Pegels siehe Abschnitt 2).

⑥ **Video/HF-Meter [VIDEO/RF]**
Zeigt bei Wiedergabe- und E-zu-E-Betrieb den Pegel des FBAS-Signals und bei Wiedergabe den Wiedergabepegel des FM-Signals (Spurlagepegel) an.
Wird als Eingangssignal ein Komponenten (Y–R, B) oder CTDM-Signal zugeleitet, so schlagen die Zeiger nicht aus.

⑦ **VIDEO-Pegelregler**
Zur Einstellung des FBAS-Pegels. Befindet sich das Gerät im E-zu-E-Betrieb, ziehen Sie den Regler heraus und stellen Sie ihn so ein, daß der Zeiger des VIDEO/RF-Meters ⑥ in den blauen Bereich ausschlägt. In der gedrückten Position wird der Pegel automatisch richtig eingestellt.

⑧ **Spurlageregler [TRACKING]**
Zur Einstellung der Spurlage bei Wiedergabe. Stellen Sie diesen Regler normalerweise in die mittlere FIXED-Position. Ist das Wiedergabebild gestört, stellen Sie diesen Regler so ein, daß das VIDEO RF-Meter ⑥ maximal ausschlägt. Nach der Wiedergabe eines derartigen Bandes, bei dem Bildstörungen auftreten, stellen Sie den Regler wieder auf FIXED zurück. Beim Aufnehmen ist der Regler stets auf FIXED zu stellen.

⑨ **MONITOR-Wähler**
Zur Wahl des Ton-Ausgangssignals von der HEADPHONES-Buchse ② , dem AUDIO OUTPUT MONITOR-Anschluß (XLR, 3 pol) oder dem MONITOR-Anschluß (8 pol) am Anschlußfeld.
CH-1: Tonkanal-1
MIX: An der HEADPHONES-Buchse liegt das Tonkanal-1-Signal links und das Kanal-2-Signal rechts an. Am AUDIO OUTPUT MONITOR-Anschluß und MONITOR-Anschluß erhält man das Mischsignal aus beiden Kanälen.
CH-2: Tonkanal-2

⑩ **Mischwähler [MIXING SELECT]**
Zur Wahl des Tonkanals, auf den das Mischsignal aus Kanal 1 und 2 aufgezeichnet wird.
To CH-1: Das Mischsignal wird auf Kanal 1 aufgezeichnet. Auf Kanal 2 wird nur das Tonkanal-2-Signal aufgezeichnet.
OFF: Das Tonkanal-1-Signal und Kanal-2-Signal wird auf Kanal 1 bzw. 2 aufgezeichnet.
To CH-2: Das Mischsignal wird auf Kanal 2 aufgezeichnet. Auf Kanal 1 wird nur das Tonkanal-1-Signal aufgezeichnet.

⑪ **Begrenzerschalter [LIMITER]**
In der Stellung ON ist der Begrenzerschaltkreis eingeschaltet. Dieser Schaltkreis begrenzt plötzlich auftretende Pegelspitzen beim Aufnehmen, so daß stets eine hochwertige Aufnahme mit geringen Verzerrungen sichergestellt ist. Nach Einstellung des Ton-Aufnahmepegels stellen Sie diesen Schalter auf ON.

⑫ **Betriebsartenwahlschalter [MODE SELECT]**

NORMAL: Diese Position ist zu verwenden, wenn das Gerät als Wiedergabe-Gerät in einem Schnitt-System eingesetzt wird. Die Kopftrommel-Phase eilt dann um den vom eingebauten TBC hervorgerufenen Verzögerungsbetrag voraus, so daß das Wiedergabe-Videosignal exakt mit dem externen Bezugssignal synchronisiert ist.

EDIT: Diese Position ist zu verwenden, wenn das Gerät als Aufnahme-Gerät in einem Schnitt-System verwendet wird. Die Kopftrommel-Phase wird dann mit dem externen Bezugssignal synchronisiert, und das Wiedergabe-Videosignal ist um 8H gegen das externe Bezugssignal verzögert.

Die Schnittfunktionstasten wie ASSEMBLE, INSERT und EDIT sind in dieser Position funktionsbereit. Auf dem Monitorschirm ist die Vertikal-Austastlücke um 8H gegenüber der Normalposition verschoben. Wenn das Ausgangssignal vom VIDEO OUTPUT-Anschluß nicht mit dem externen Bezugssignal synchronisiert werden muß, kann diese Verschiebung vermieden werden. Genaueres siehe Abschnitt 2.

⑬ **Indikator für automatische Abschaltung [AUTO OFF]**

Leuchtet, wenn Feuchtigkeit auf der Kopftrommel-Einheit festgestellt wurde.

⑭ **Vorwahltaste [PRESET]**

Zur Eingabe des Zeitcodes, nachdem dieser mit der SHIFT-Taste ⑯ und ADVANCE-Taste ⑮ eingestellt wurde.

⑮ **Weiterschalttaste [ADVANCE]**

Durch Drücken dieser Taste wird die gerade blinkende Ziffer um eins erhöht.

⑯ **Verschiebetaste [SHIFT]**

Zum Vershieben der blinkenden Position. Bei jedem Drücken wird die blinkende Position nach rechts verschoben, und sobald das rechte Ende erreicht ist, blinkt wieder die ganz linke Position.

⑰ **Haltetaste und Indikator [HOLD]**

Beim Drücken dieser Taste leuchtet der Indikator und die Daten der Zeitzähler-Anzeige ㊻ werden gehalten. Durch erneutes Drücken erlischt der Indikator wieder, und die momentane Bandposition wird angezeigt.

⑱ **CTL/Zeitcode-Wähler [CTL/TC]**

Zur Wahl der auf der Zeitzähler-Anzeige ㊻ angezeigten Daten: CTL oder Zeitcode. Außerdem wird hier das Bezugssignal für den Schnittbetrieb gewählt. Steht der Fernbedienungswähler ㉑ auf REMOTE 1, so wird die Anzeige-Betriebsart vom angeschlossenen Gerät gewählt und der CTL/TC-Wähler hat keinen Einfluß.

⑲ **Normenwähler [STD/NON STD]**

Dieser Wähler ist entsprechend dem dem VIDEO INPUT-Anschluß am Anschlußfeld zugeleiteten Signal einzustellen.

STD: Wenn das FBAS-Signal der PAL-Farbnorm entspricht.

NON STD: Wenn Luminanz- und Chromasignale des angeschlossenen FBAS-Signals nicht verschachtelt sind oder ein modifiziertes PAL-Signal, dessen Farbträgerfrequenz nicht der PAL-Norm entspricht, zugeleitet wird.

⑳ **Eingangswahlschalter [INPUT SELECT]**

Zur Wahl des Video-Eingangssignals für Aufnahme- und Schnittbetrieb.

COMPOSITE: Für FBAS-Signal, das dem VIDEO INPUT-Anschluß zugeleitet wird.

CTDM: Für CTDM-Signal (komprimiertes Zeitteilungsmultiplex-Signal), das dem DUB/COMPONENT-Eingang zugeleitet wird.

Y–R, B: Für Drei-Komponenten-Signale (Y, R–Y und B–Y), die dem DUB/COMPONENT-Eingang zugeleitet werden.

㉑ **Fernbedienungswähler**

Wenn zwei oder mehrere Videorecorder am REMOTE 1- oder REMOTE 2-Anschluß angeschlossen sind.

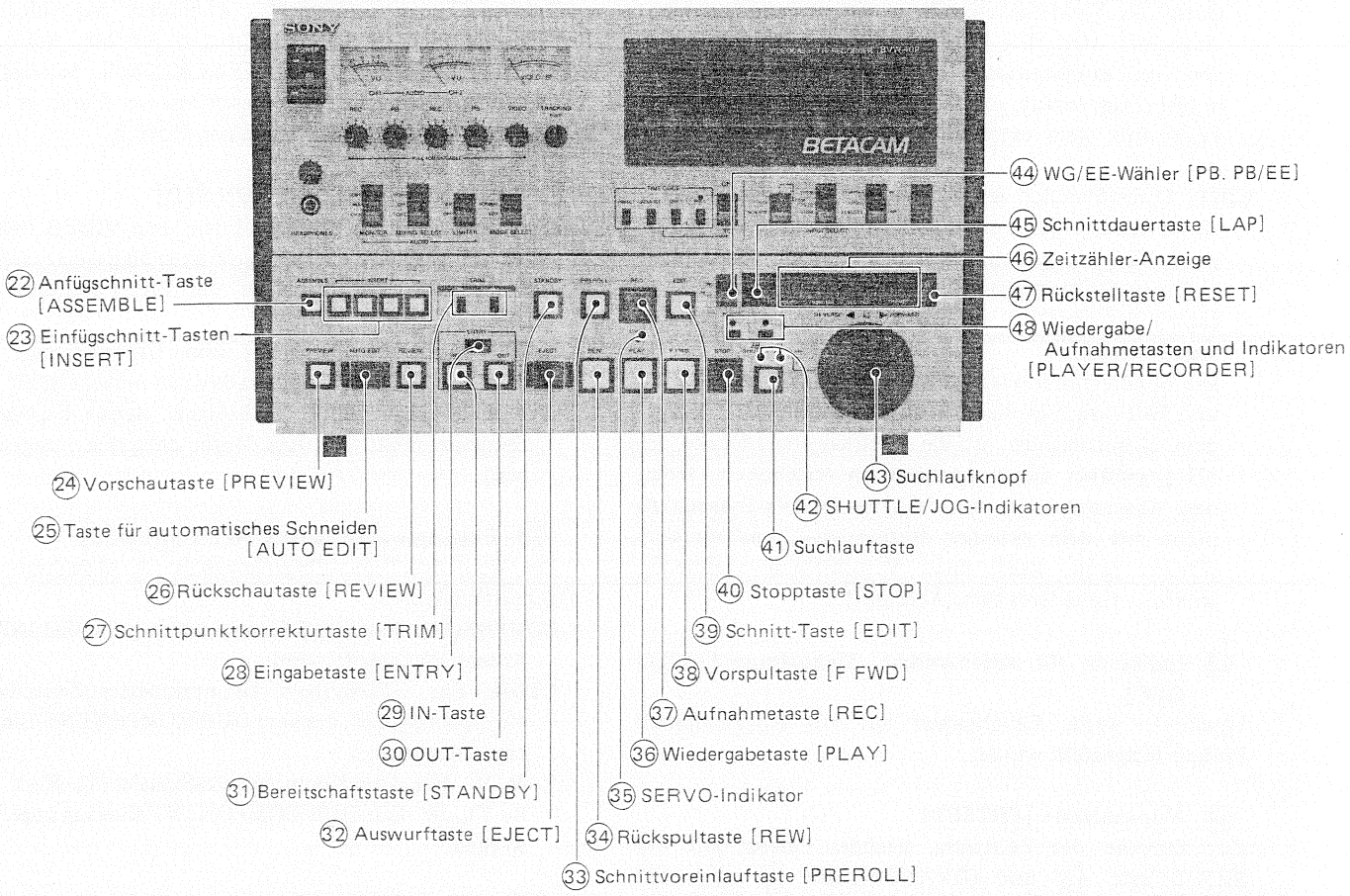
REMOTE 1 (9P): Wenn das Gerät von einem am 9 poligen REMOTE 1-Anschluß am Anschlußfeld angeschlossenen Gerät gesteuert werden soll. Die Funktionstasten des BVW-40P arbeiten dann nicht (außer STOP- und EJECT-Tasten*).

LOCAL: Wenn die Funktionstasten des BVW-40P sowohl den BVW-40P als auch das angeschlossene Gerät steuern sollen.

REMOTE 2 (36P): Wenn das Gerät von einem am 36 poligen REMOTE 2-Anschluß am Anschlußfeld angeschlossenen Gerät gesteuert werden soll. Die Funktionstasten des BVW-40P arbeiten dann nicht (außer STOP- und EJECT-Tasten*).

* Zur Aktivierung zusätzlicher Funktionstasten oder Desaktivierung aller Tasten siehe Abschnitt 2.

Unteres Bedienungspult



(22) Anfügschnitt-Taste [ASSEMBLE]

Drücken Sie diese Taste für Anfügschnitt-Betrieb. Die Taste leuchtet dann auf. Durch erneutes Drücken kann diese Betriebsart wieder abgeschaltet werden, und die Taste erlischt.

(23) Einfügschnitt-Tasten [INSERT]

Drücken Sie eine dieser Tasten zum Umschalten auf Einfügschnitt-Betrieb und zur Wahl des Eingangssignals für den Schnittbetrieb. Die gedrückte Taste leuchtet jeweils auf. Durch erneutes Drücken kann diese Betriebsart wieder abgeschaltet werden, und die Taste erlischt.

(24) Vorschautaste [PREVIEW]

Nach Eingabe der Schnittpunkte kann durch Drücken dieser Taste die Schnitt-Aufnahme probeweise ausgeführt werden. Die Bänder laufen dabei genau wie bei der wirklichen Schnitt-Aufnahme, und das Schnitt-Ergebnis kann auf dem Monitor des Aufnahme-Geräts kontrolliert werden, ohne daß die Aufnahme wirklich ausgeführt wird. Wenn kein IN-Punkt eingegeben wurde, wird automatisch der Punkt als IN-Punkt festgelegt, an dem die Taste gedrückt wurde.

(25) Taste für automatisches Schneiden [AUTO EDIT]

Nach Eingabe der Schnittpunkte wird durch Drücken dieser Taste die Schnitt-Aufnahme automatisch ausgeführt. Wenn kein IN-Punkt eingegeben wurde, wird die Schnitt-Aufnahme von dem Punkt, an dem die Taste gedrückt wird, bis zum OUT-Punkt ausgeführt.

(26) Rückschautaste [REVIEW]

Durch Drücken dieser Taste kann der bereits ausgeführte Bild- und Tonschnitt noch einmal kontrolliert werden.

(27) Schnittpunktkorrekturtaste [TRIM]

Die eingegebenen Schnittpunkte können um eine beliebige Anzahl von Vollbildern geändert werden. Halten Sie dazu die IN-Taste (29) oder OUT-Tast (30) gedrückt und drücken Sie gleichzeitig die TRIM + oder TRIM – Taste. Bei jedem Drücken der TRIM + Taste wird der Schnittpunkt um ein Vollbild vor und bei jedem Drücken der TRIM – Taste um ein Vollbild zurückgeschaltet.

㉘ Eingabetaste [ENTRY]
Durch gleichzeitiges Drücken dieser Taste mit der IN-Taste ㉙ oder OUT-Taste ㉚ wird der IN- bzw. OUT-Punkt eingegeben. Die gedrückte Taste leuchtet dabei jeweils auf.

㉙ IN-Taste
Drücken Sie diese Taste zusammen mit der ENTRY-Taste ㉘ zum Eingeben des IN-Punktes. Wenn nur diese Taste nach Eingabe des IN-Punktes gedrückt wird, werden die Daten des IN-Punktes auf der Zeitzähler-Anzeige ㊻ angezeigt.

㉚ OUT-Taste
Drücken Sie diese Taste zusammen mit der ENTRY-Taste ㉘ zum Eingeben des OUT-Punktes. Wenn nur diese Taste nach Eingabe des OUT-Punktes gedrückt wird, werden die Daten des OUT-Punktes auf der Zeitzähler-Anzeige ㊻ angezeigt.

㉛ Bereitschaftstaste [STANDBY]
Bei eingeschaltetem Gerät leuchtet diese Taste und zeigt damit an, daß die Kopftrommel rotiert und sich das Gerät in Bereitschaft befindet.
Wird diese Taste in der Stopp-Funktion gedrückt, so bleibt die Kopftrommel stehen, der Bandspannmechanismus wird abgeschaltet und diese Taste erlischt (Bereitschaft ausgeschaltet). Dauert die Stopp-Funktion länger als acht Minuten, so schaltet das Gerät automatisch die Bereitschafts-Funktion aus, um die Video-Köpfe zu schonen. Um auf Bereitschaft oder eine andere Funktion umzuschalten, drücken Sie die STANDBY-Taste bzw. die gewünschte Funktionstaste (außer STOP-Taste).

㉜ Auswurftaste [EJECT]
Durch Drücken dieser Taste wird das Band freigegeben, und die Cassette ausgeworfen. Wenn der Zeitzähler auf CTL-Anzeige geschaltet ist, erfolgt ein Rückstellen der Zeitzähler-Anzeige auf „0:00:00:00".
Vergessen Sie nicht, die Cassette vor dem Ausschalten herauszunehmen.

㉝ Schnittvoreinlauftaste [PREROLL]
Durch Drücken dieser Taste spult das Band zum Schnittvoreinlaufpunkt (fünf Sekunden vor dem IN-Punkt).
Wurde der IN-Punkt nicht eingegeben und wird diese Taste gedrückt, so wird der Punkt, an dem die Taste gedrückt wird, als IN-Punkt festgelegt und der Schnittvoreinlauf dann ausgeführt.

㉞ Rückspultaste [REW]
Drücken Sie diese Taste zum Rückspulen des Bandes.

㉟ SERVO-Indikator
Leuchtet, wenn die Kopftrommel und der Capstan synchronisiert sind.

㊱ Wiedergabetaste [PLAY]
Zum Wiedergeben des Bandes.
Durch gleichzeitiges Drücken der REC-Taste ㊲ und der EDIT-Taste ㊴ wird die Aufnahme bzw. die manuelle Schnitt-Anfnahme gestartet. Während der Aufnahme kann durch Drücken dieser Taste die Aufnahme bzw. Schnitt-Aufnahme beendet und das Gerät auf Wiedergabe geschaltet werden.

㊲ Aufnahmetaste [REC]
Durch Drücken dieser Taste zusammen mit der PLAY-Taste ㊱ wird die Aufnahme gestartet.
Wird diese Taste in der Wiedergabe-, Suchlauf-, Vorspul- oder Rückspul-Funktion gedrückt, so kann das E-zu-E-Video- und Ton-Signal überwacht werden. Wird diese Taste in der Stopp-Funktion gedrückt, so schaltet das Gerät in die E-zu-E-Funktion. Zum Umschalten in die Stopp-Funktion drücken Sie die STOP-Taste.

㊳ Vorspultaste [F FWD]
Zum Vorspulen des Bandes.

㊴ Schnitt-Taste [EDIT]
Durch gleichzeitiges Drücken dieser Taste mit der PLAY-Taste wird die manuelle Schnitt-Aufnahme gestartet.
Wird diese Taste in der Wiedergabe-, Suchlauf-, Vorspul- oder Rückspul-Funktion gedrückt, so kann das E-zu-E-Video- und Ton-Signal überwacht werden. Wird diese Taste in der Stopp-Funktion gedrückt, so schaltet das Gerät auf E-zu-E-Betrieb und das an den ASSEMBLE-Tasten ㉒ bzw. INSERT-Tasten ㉓ gewählte Eingangssignal kann überwacht werden. Zum Umschalten in die Stopp-Funktion drücken Sie die STOP-Taste.

㊵ Stopptaste [STOP]
Zum Stoppen des Bandlaufs. In der Stopp-Funktion rotiert die Kopftrommel weiter, das Band bleibt um die Kopftrommel geschlungen, und man erhält ein Stanbild. Beim Einlegen einer Cassette schaltet das Gerät automatisch zunächst in die Stopp-Funktion.

㊶ Suchlauftaste
Zum Umschalten in die Suchlauf-Funktion.
Drücken Sie diese Taste, nachdem der Suchlaufknopf im Shuttle-Betrieb auf die entsprechende Position gestellt wurde. Die Wiedergabe mit der am Suchlaufknopf eingestellten Geschwindigkeit beginnt dann.

㊷ SHUTTLE/JOG-Indikatoren
Der Shuttle-Indikator leuchtet auf, wenn sich das Gerät im Shuttle-Betreib und der Jog-Indikator leuchtet auf, wenn es sich im Jog-Betrieb befindet.

㊸ Suchlaufknopf
Zum schnellen Auffinden des gewünschten Schnittpunktes. Durch Drehen nach rechts spult das Band vor (▷ -Indikator leuchtet) und durch Drehen nach links spult es zurück (◁ -Indikator leuchtet). Wenn das Band stoppt, leuchtet der □-Indikator.
Durch Drücken des Knopfes wird das Gerät auf Jog-Betrieb und durch erneutes Drücken wieder in den Shuttle-Betrieb geschaltet, wobei der jeweilige Indikator aufleuchtet.

SHUTTLE: Durch Drehen des Knopfes nach rechts oder links kann die Bandgeschwindigkeit von 1/30 bis 10 facher Normalgeschwindigkeit in beide Richtungen variiert werden. In der Mittelstellung erhält man ein Standbild.

JOG: Beim Drehen des Knopfes läuft das Band entsprechend der Knopf-Drehrichtung und Knopf-Drehgeschwindigkeit von 0 bis 1 facher Normalgeschwindigkeit. Beim Anhalten des Knopfes erhält man ein Standbild.

- Stellen Sie nach dem Einschalten den Knopf zunächst in die Mittelposition.

㊹ WG/EE-Wähler [PB. PB/EE]
Zur Wahl des bei der Vorspul-, Rückspul-, Stopp- und Bereitschafts-Funktion am VIDEO OUTPUT-Anschluß anliegenden Ausgangssignals: Wiedergabe (WG) oder E-zu-E (EE).

Betriebsart Schalterstellung	Vorspulen Rückspulen	Stopp	Bereitschaft
WG	WG	WG	WG
WG/EE	EE	EE	EE

㊺ Schnittdauertaste [LAP]
Durch Drücken dieser Taste wird die zwischen den eingegebenen IN- und OUT-Punkten liegende Zeit (Schnittdauer) auf der Zeitzähler-Anzeige angezeigt.

㊻ Zeitzähler-Anzeige
Steht der CTL/TC-Wähler ⑭ auf CTL, so wird hier die Bandlaufzeit in Stunden, Minuten, Sekunden und Vollbildern durch Zählen der CTL-Signale angezeigt. Steht der CTL/TC-Wähler dagegen auf TC, so wird die Bandposition in Stunden, Minuten, Sekunden und Vollbildern durch Lesen des auf dem Band aufgezeichneten Zeitcodes angezeigt.

㊼ Rückstelltaste [RESET]
Zum Rückstellen des CTL-Zeitzählers und zum Löschen der eingegebenen Schnittpunkte. Steht der CTL/TC-Wähler ⑭ auf CTL, so wird auch die Zeitzähler-Anzeige ㊻ auf „0:00:00:00" zurückgestellt. Wenn der CTL/CT-Schalter auf TC steht, ändert sich die Anzeige nicht.

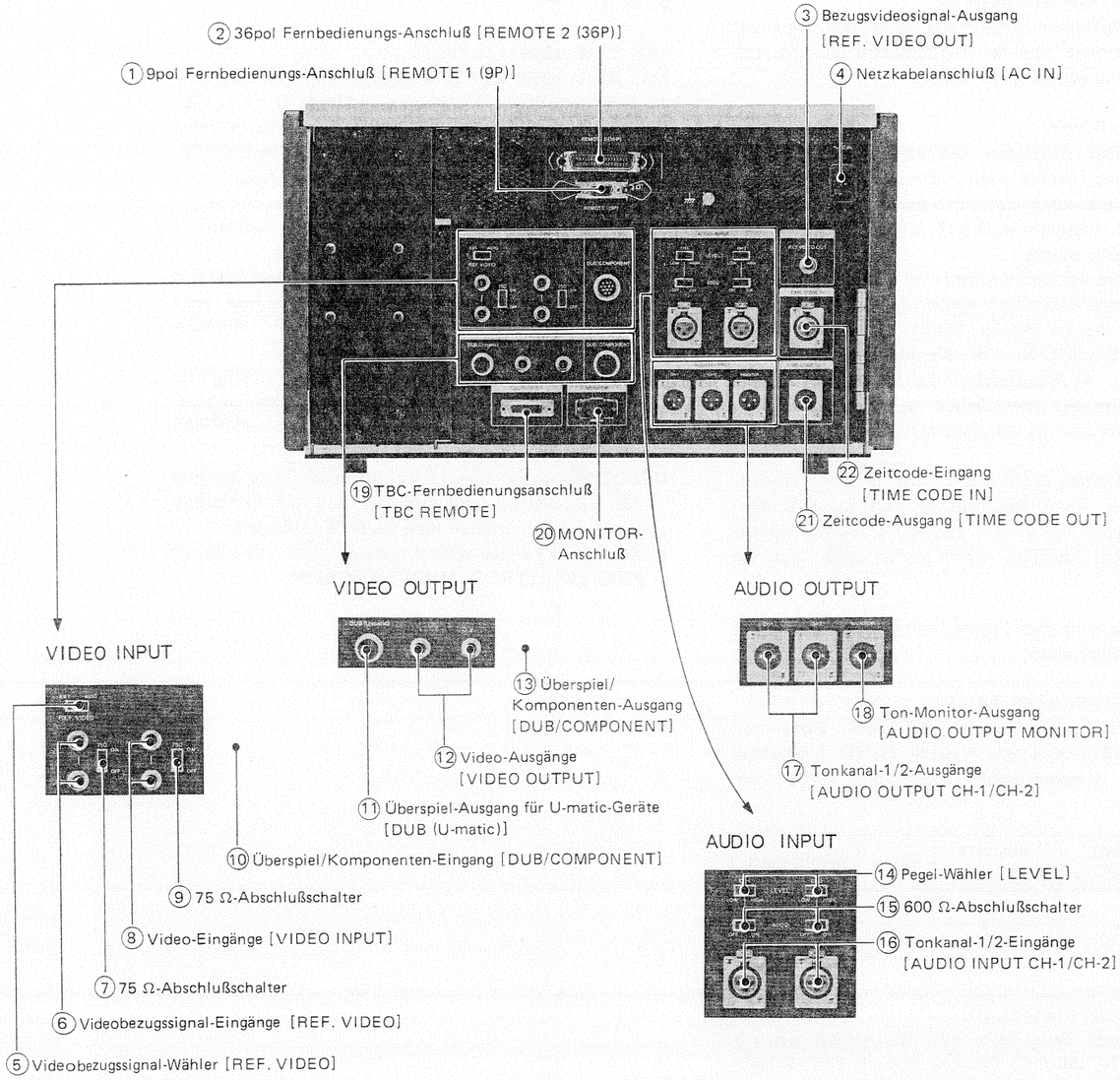
㊽ Wiedergabe/Anfnahme-Tasten und Indikatoren [PLAYER/RECORDER]
Verwenden Sie diese Tasten wie folgt, wenn das Gerät als Aufnahme-Gerät eines Schnitt-Systems verwender wird und unter Verwendung des 9 poligen REMOTE 1 Anschlusses an andere Schnitt-Geräte angeschlossen ist.

PLAYER-Taste: Beim Drücken dieser Taste, leuchtet der PLAYER-Indikator auf, und das angeschlossene Wiedergabe-Gerät wird von den Funktionstasten des PVW-40P aus bedient.

RECORDER-Taste: Beim Drücken dieser Taste leuchtet der RECORDER-Indikator auf, und die Funktionstasten dienen zur Bedienung des PVW-40P selbst.

- Wird der PVW-40P alleine verwendet, so arbeiten die PLAYER- und RECORDER-Tasten nicht.

1-2-2. Anschlußfeld



① 9pol Fernbedienungs-Anschluß [REMOTE 1 (9P)]
Hier können über das mitgelieferte 9 pol Fernbedienungskabel folgende Geräte angeschlossen werden: BVW-40P, BVW-10P, U-matic-Videorecorder wie z.B. BVU-800P und -820P oder Schnitt-Steuereinheit der BVE-Serie wie z.B. BVE-800.

② 36pol Fernbedienungs-Anschluß [REMOTE 2 (36P)]
Hier kann unter Verwendung eines 36 pol Fernbedienungskabels (Sonderzubehör) eine Schnitt-Steuereinheit der BVE-Serie wie z.B. BVE-500A, -1000 und -5000 angeschlossen werden.

③ Bezugsvideosignal-Ausgang [REF. VIDEO OUT] (BNC-Buchse)
Das Ausgangssignal vom eingebauten Schwarzburst-Generator liegt hier an. Wenn kein externes Bezugssignal zum angeschlossenen Videorecorder geleitet werden kann, verbinden Sie diesen Anschluß mit dem REF. VIDEO IN- oder EXT. SYNC IN-Anschluß des Wiedergabe-Geräts.

④ Netzkabelanschluß [AC IN]
Zum Anschluß des mitgelieferten Netzkabels.

⑤ Videobezugssignal-Wähler [REF. VIDEO]
Zur Wahl des Bezugssignals.
EXT: Das Signal des REF. VIDEO INPUT-Anschlusses ⑥ wird zum Bezugssignal.
AUTO: Normalerweise diese Position verwenden. Beim Aufnehmen wird dann das am VIDEO INPUT-Anschluß ⑧ oder DUB/COMPONENT-Anschluß ⑩ angeschlossene Eingangssignal zum Bezugssignal. Bei Wiedergabe wird das Bezugssignal entsprechend der Stellung des MODE SELECT-Schalters am Bedienungspult gewählt.
- Die Wahl des Bezugssignals hängt auch von anderen Bedienungselementen ab.

⑥ Videobezugssignal-Eingänge [REF. VIDEO] (BNC-Buchsen)
Zum Anschluß eines Video-Bezugssignals mit Farbburst (FBAS). Der Anschluß kann in Brückenschaltung erfolgen. Werden bei einer Brückenschaltung beide Buchsen verwendet, so ist der 75 Ω-Abschlußschalter ⑦ auf OFF zu stellen.

⑦ 75 Ω-Abschlußschalter
Zum Abschluß der REF. VIDEO-Eingänge ⑥.
ON: Wenn nur eine der Buchsen verwendet wird.
OFF: Wenn beide Buchsen in einer Brückenschaltung angeschlossen werden.

⑧ Video-Eingänge [VIDEO INPUT] (BNC-Buchsen)
Zum Anschluß eines FBAS-Signals.
Der Anschluß kann in Brückenschaltung erfolgen. Werden bei einer Brückenschaltung beide Buchsen verwendet, so ist der 75 Ω-Abschlußschalter ⑨ auf OFF zu stellen.

⑨ 75 Ω-Abschlußschalter
Zum Abschluß der REF. VIDEO-Eingänge ⑧.
ON: Wenn nur eine der Buchsen verwendet wird.
OFF: Wenn beide Buchsen in einer Brückenschaltung angeschlossen werden.

⑩ Überspiel/Komponenten-Eingang [DUB-COMPONENT] (12 pol)
Hier kann unter Verwendung des 12 pol Überspielkabels (mitgeliefert) das Komponenten-Videosignal (CTDM) von einem BVW-10P oder BVW-40P zugeleitet werden.

⑪ Überspiel-Ausgang für U-matic-Geräte [DUB (U-matic)] (7 pol)
Hier liegt ein Video-Überspielsignal für U-matic-Videorecorder an. Schließen Sie diese Buchse über ein 7 pol Überspielkabel (Sonderzubehör) an den DUB IN-Anschluß eines U-matic-Videorecorders an.

⑫ Video-Ausgänge [VIDEO OUTPUT] (BNC-Buchsen)
Hier liegt ein FBAS-Signal an.
Verbinden Sie diese Buchsen mit dem Video-Eingang eines Videorecorders oder eines Videomonitors.

⑬ Überspiel/Komponenten-Ausgang [DUB/COMPONENT] (12 pol)
Ein Komponenten-Videosignal aus Luminanzsignal (Y), Chrominanzsignal (R-Y, B-Y) und komprimiertem Zeitteilungsmultiplex-Signal (CTDM) liegt hier an.
Zum Überspielen oder Schneiden eines Videosignals unter Verwendung von zwei BVW-40P verbinden Sie diesen Ausgang unter Verwendung des 12 pol Überspielkabels (mitgeliefert) an den DUB/COMPONENT-Eingang eines weiteren BVW-40P.

⑭ Pegel-Wähler [LEVEL]
Dieser Wähler ist entsprechend des Eingangstonpegels der AUDIO INPUT-Anschlüsse ⑯ einzustellen.
LOW: –60 dB (für Mikrofon-Eingangssignal)
HIGH: +4 dB (für Line-Eingangssignal)

⑮ 600 Ω-Abschlußschalter
Zur Wahl der Eingangsimpedanz, wenn der LEVEL-Schalter ⑭ auf HIGH steht.
ON: 600 Ohm
OFF: 10 kOhm

⑯ **Tonkanal-1/2-Eingänge [AUDIO INPUT CH-1/ CH-2] (XLR, 3 pol)**

Zum Anschluß von Mikrofonsignalen oder Signalen von Audio-Geräten.

⑰ **Tonkanal-1/2-Ausgänge [AUDIO OUTPUT CH-1/ CH-2] (XLR, 3 pol)**

Die Tonsignale liegen hier an. Der Ausgangspegel kann am PB-Pegelregler des Bedienungspultes eingestellt werden. Schließen Sie hier die Ton-Eingänge eines anderen Videorecorders an.

⑱ **Ton-Monitor-Ausgang [AUDIO OUTPUT MONITOR] (XLR, 3 pol)**

Zum Anschluß des Audio-Geräts zur Tonüberwachung. Das am MONITOR-Wähler und MIXING SELECT-Schalter am Bedienungspult gewählte Tonsignal liegt hier an.

⑲ **TBC-Fernbedienungsanschluß [TBC REMOTE] (15 pol)**

Zum Fernbedienen des eingebauten Time-Base-Correctors (TBC) kann hier die Fernbedieneinheit BK-2007 (Sonderzubehör) angeschlossen werden.

⑳ **MONITOR-Anschluß (8 pol)**

Verbinden Sie diesen Anschluß über ein Monitor-Verbindungskabel (Sonderzubehör) mit dem Videorecorder-Anschluß (8 pol) eines Videomonitors. Die zu überwachenden Video- und Tonsignale werden gleichzeitig zugeleitet. Es liegt das am MONITOR-Wähler und MIXING SELECT-Schalter am Bedienungspultes gewählte Tonsignal an.

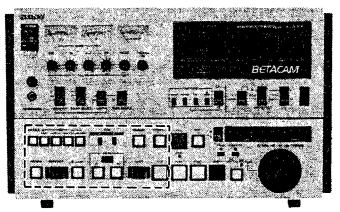
㉑ **Zeitcode-Ausgang [TIME CODE OUT] (XLR, 3 pol)**

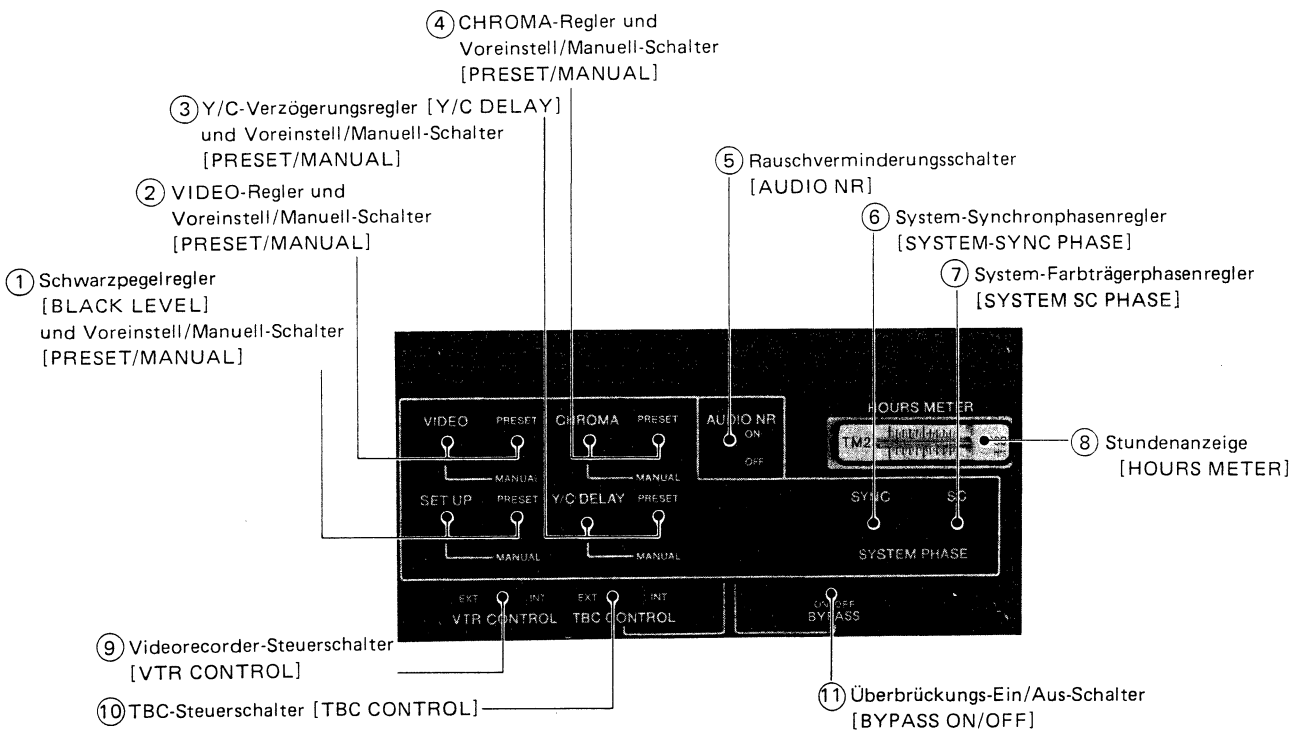
Das Zeitcodesignal liegt hier an. Schließen Sie dieses Signal an den Zeitcode-Eingang eines Zeitcode-Lesers oder eines anderen Videorecorders an.

㉒ **Zeitcode-Eingang [TIME CODE IN] (XLR, 3 pol)**

Zum Aufnehmen des Zeitcodesignals verbinden Sie diesen Eingang mit dem Zeitcode-Ausgang des Zeitcode-Generators oder des anderen Videorecorders.

1-2-3. Hilfs-Bedienungsfeld





① Schwarzpegelregler [BLACK LEVEL] und Voreinstell/Manuell-Schalter [PRESET/MANUAL]

Bei Einstellung des PRESET/MANUAL-Schalters auf:

MANUAL: Der Ausgangs-Schwarzpegel kann am BLACK LEVEL-Regler in einem Bereich von 0 bis +15 IRE eingestellt werden.

PRESET: Unabhängig von der Einstellung des BLACK LEVEL-Regler erhält man den voreingestellten Ausgangs-Schwarzpegel.

② VIDEO-Regler und Voreinstell/Manuell-Schalter [PRESET/MANUAL]

Bei Einstellung des PRESET/MANUAL-Schalters auf:

MANUAL: Der FBAS-Ausgangspegel kann am VIDEO-Regler in einem Breich von ±3 dB eingestellt werden. Am CHROMA-Regler kann der Chromapegel nur in einem Bereich bis zu +3 dB eingestellt werden.

PRESET: Unabhängig von der Einstellung des VIDEO-Reglers erhält man den voreingestellten Ausgangs-Videopegel.

③ Y/C-Verzögerungsregler [Y/C DELAY] und Voreinstell/Manuell-Schalter [PRESET/MANUAL]

Bei Einstellung des PRESET/MANUAL-Schalters auf:

MANUAL: Die Y/C-Verzögerung kann in einem Bereich von + 50 nsec eingestellt werden.

PRESET: Unabhängig von der Reglerstellung erhält man stets den voreingestellten Y/C-Verzögerungswert.

④ CHROMA-Regler und Voreinstell/Manuell-Schalter [PRESET/MANUAL]

Bei Einstellung des PRESET/MANUAL-Schlaters auf:

MANUAL: Der Ausgangs-Chromapegel kann am CHROMA-Regler in einem Bereich von ±3 dB eingestellt werden. Am VIDEO-Regler ist jedoch nur ein maximaler Einstellbereich von + 3 dB möglich.

PRESET: Unabhängig von der Reglerstellung erhält man stets den voreingestellten Chromapegel.

⑤ Rauschverminderungsschalter [AUDIO NR]

Zur Rauschverminderung ist in diesem Gerät das Dolby-C-System vorgesehen.

ON: Aufnahme und Wiedergabe wird mit Dolby-Rauschverminderung durchgeführt.

OFF: Aufnahme und Wiedergabe wird ohne Dolby-Rauschverminderung durchgeführt.

⑥ System-Synchronphasenregler [SYSTEM SYNC PHASE]

Die Ausgangs-Synchronphase kann hier in bezug auf das Eingangssignal in einem Bereich von −1 µsec bis + 3 µsec eingestellt werden. Dieser Regler kan beispielsweise verwendet werden, um die Ausgangsphase an die Bezugsphase des Senders anzupassen oder um einen Anschluß von zwei oder mehr Videorecordern an den BVW-40P zu ermöglichen so daß Spezialeffekte wie weiche Überblendungen möglich sind.

⑦ System-Farbträgerphasenregler [SYSTEM SC PHASE]

Hier kann die Ausgangs-Farbträgerphase in bezug auf die Eingangs-Bezugsphase in einem Bereich von 360°ss eingestellt werden. Dieser Regler kann beispielsweise verwendet werden, um die Ausgangsphase an die Bezugsphase des Senders anzupassen oder um einen Anschluß von zwei oder mehr Videorecordern an den BVW-40P zu ermöglichen, so daß Spezialeffekte wie weiche Überblendungen möglich sind.

⑧ Stundenanzeige [HOURS METER]

Zeigt die bisherige Gesamt-Rotationszeit der Kopftrommel an (bis max. 1000 Stunden).

⑨ Videorecorder-Steuerschalter [VTR CONTROL]

INT: Normalstellung

EXT: Zum Fernbedienen des Geräts, wenn das Bedienungspult abgenommen und mit dem 40pol Flachbandkabel BK-801 (Sonderzubehör) angeschlossen wird.

⑩ TBC-Steuerschalter [TBC CONTROL]

INT: Zum Bedienen des eingebauten Time-Base-Correctors (TBC) am Hilfs-Bedienungspult.

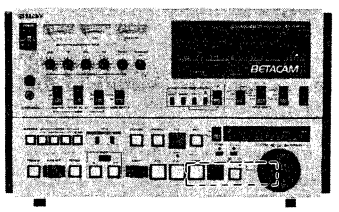
EXT: Zum Fernbedienen des eingebauten TBC von der Fernbedieneinheit BK-2007 (Sonderzubehör).

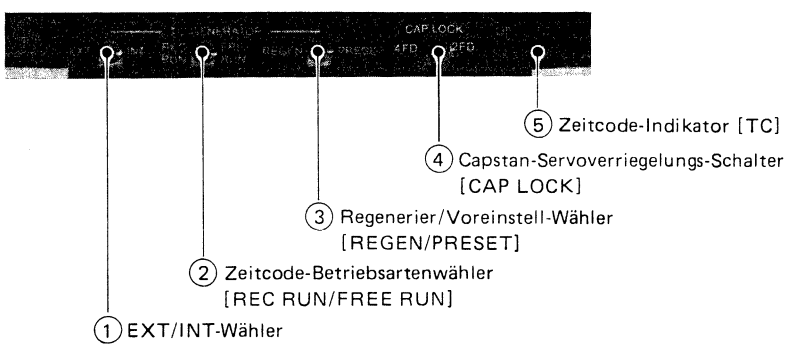
⑪ Überbrückungs-Ein/Aus-Schalter [BYPASS ON/OFF]

Normalerweise auf OFF stellen.

Wenn ein FBAS-Signal, das nicht mit dem Video-Bezugssignal synchronisiert werden kann (z.B. Sendesignal von einem Mikrowellen-Netzwerk), aufgenommen werden soll, kann es bei der Aufnahme zu einem instabilen E-zu-E-Signal am Monitor kommen, obwohl die Aufnahme normal ausgeführt wird. Synchronisieren Sie in diesem Fall das Signal unter Verwendung einer Einzelbild-Synchronisierung mit dem Bezugssignal oder stellen Sie diesen Schalter auf ON.

1-2-4. Zeitcode-Leiterplatte





① **EXT/INT-Wähler**

EXT: Zur Verwendung eines externen Zeitcode-Generators.

INT: Zur Verwendung des eingebauten Zeitcode-Generators.

② **Zeitcode-Betriebsartenwähler [REC RUN/FREE RUN]**

REC RUN: Der Zeitcode-Generator arbeitet nur, wenn der Videorecorder auf Aufnahme geschaltet ist.

FREE RUN: Der Zeitcode-Generator arbeitet unabhängig von der Videorecorder-Betriebsart. Wird der Generator auf Normalzeit eingestellt, so wird die Aufnahmezeit auf Band aufgezeichnet.

③ **Regenerier/Voreinstell-Wähler [REGEN/PRESET]**

Der eingebaute Zeitcode-Generator wird mit dem wiedergegebenen Zeitcodesignal, mit einem anderen Videorecorder oder mit einem externen Zeitcode-Generator synchronisiert.

PRESET: Der eingebaute Zeitcode-Generator wird mit den SHIFT-, ADVANCE- und PRESET-Tasten am Bedienungspult voreingestellt.

④ **Capstan-Servoverriegelungs-Schalter [CAP LOCK]**

2 FD: Normalerweise diese Stellung verwenden.

4 FD: In dieser Stellung erhält man bei Wiedergabe einen Zeitcode mit einer Vier-Halbbild-Sequenz für das PAL-System und die Capstan-Phasenregelung erfolgt auf der Basis des wiedergegebenen Zeitcodes. Aus diesem Grund muß auf dem wiederzugebenden Band ein durchgehendes Zeitcodesignal mit richtiger Phase aufgezeichnet sein.

Hinweis: Wenn kein durchgehender Zeitcode mit richtiger Phase aufgezeichnet ist, verwenden Sie die Stellung 2 FD.

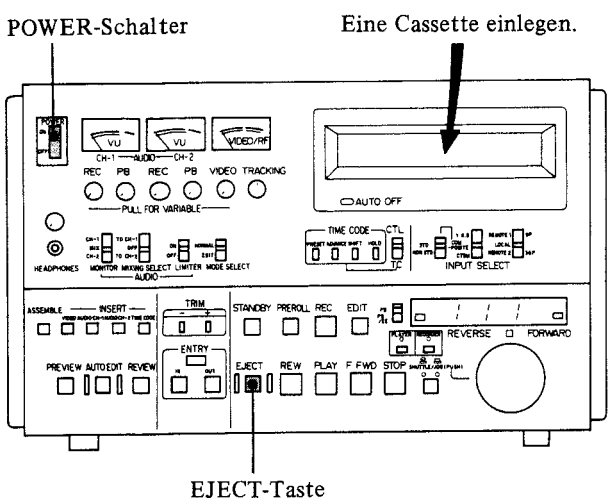
⑤ **Zeitcode-Indikator [TC]**

Leuchtet, wenn auf dem wiedergegebenen Band ein Zeitcode aufgezeichnet ist.

1-3. EINLEGEN UND HERAUSNEHMEN DER CASSETTE

Einlegen der Cassette

Stellen Sie den POWER-Schalter auf ON und legen Sie die Cassette ein.
Die Cassette fährt automatisch ein, das Band wird um die Kopftrommel geschlungen, die Kopftrommel beginnt zu rotieren, und man erhält ein Standbild.

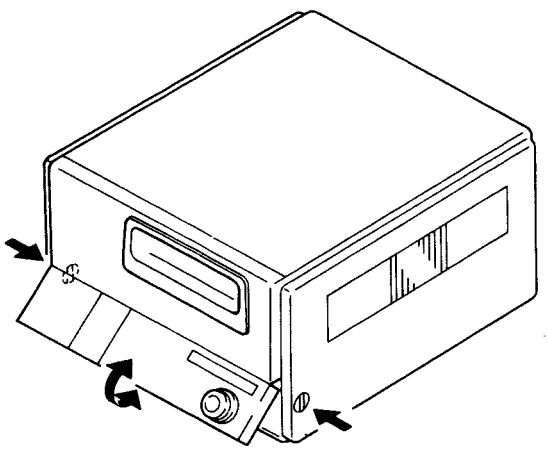


Herausnehmen der Cassette

Drücken Sie hierzu bei eingeschaltetem Gerät die EJECT-Taste.
Das Band wird dann freigegeben und die Cassette automatisch ausgeworfen.

- Nehmen Sie auf jeden Fall nach der Verwendung die Cassette heraus.

Positionierung des Bedienungspultes



2. Das Bedienungspult kann nun in sechs Stufen bis zu 90° geschwenkt werden.

1. Die Arretierschrauben auf beiden Seiten mit einer Münze oder einem langen Schraubenzieher öffnen.
3. Nach der Positionierung die Schraube wieder festziehen.

- Das Bedienungspult kann auch abgenommen werden, so daß über ein Kabel eine Fernbedienung möglich ist. Genaueres dazu siehe Abschnitt 2.

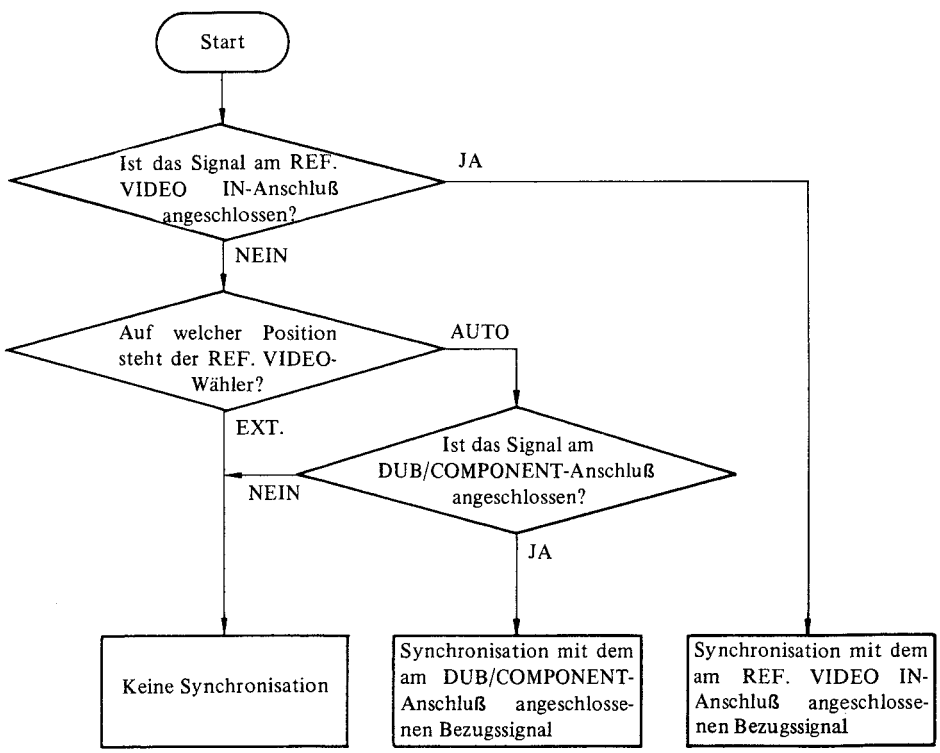
1-4. BEZUGSSIGNAL VOM EINGEBAUTEN TIME-BASE-CORRECTOR UND SERVO-SYSTEM

1-4-1. Bezugssignal

Der BVW-40P ist mit einem Videosignal-Generator (Schwarzburst) ausgestattet, so daß ein Schneiden ohne Zuführung eines externen Bezugssignals möglich ist. Das Signalgenerator-Ausgangssignal wird dem eingebauten TBC, dem Servo-Schaltkreis sowie dem REF. VIDEO OUT-Anschluß des Anschlußfeldes zugeleitet. Wenn bei Band-zu-Band-Schnittbetrieb kein externes Bezugssignal für das Schnitt-System vorhanden ist, verbinden Sie den REF. VIDEO OUT-Anschluß mit dem REF. VIDEO IN- oder EXT. SYNC IN-Anschluß des anderen Videorecorders. Wenn zwei BVW-40P über das 12pol Überspielkabel (mitgeliefert) zusammengeschaltet sind, so wird das Bezugssignal über das Überspielkabel zugeleitet.

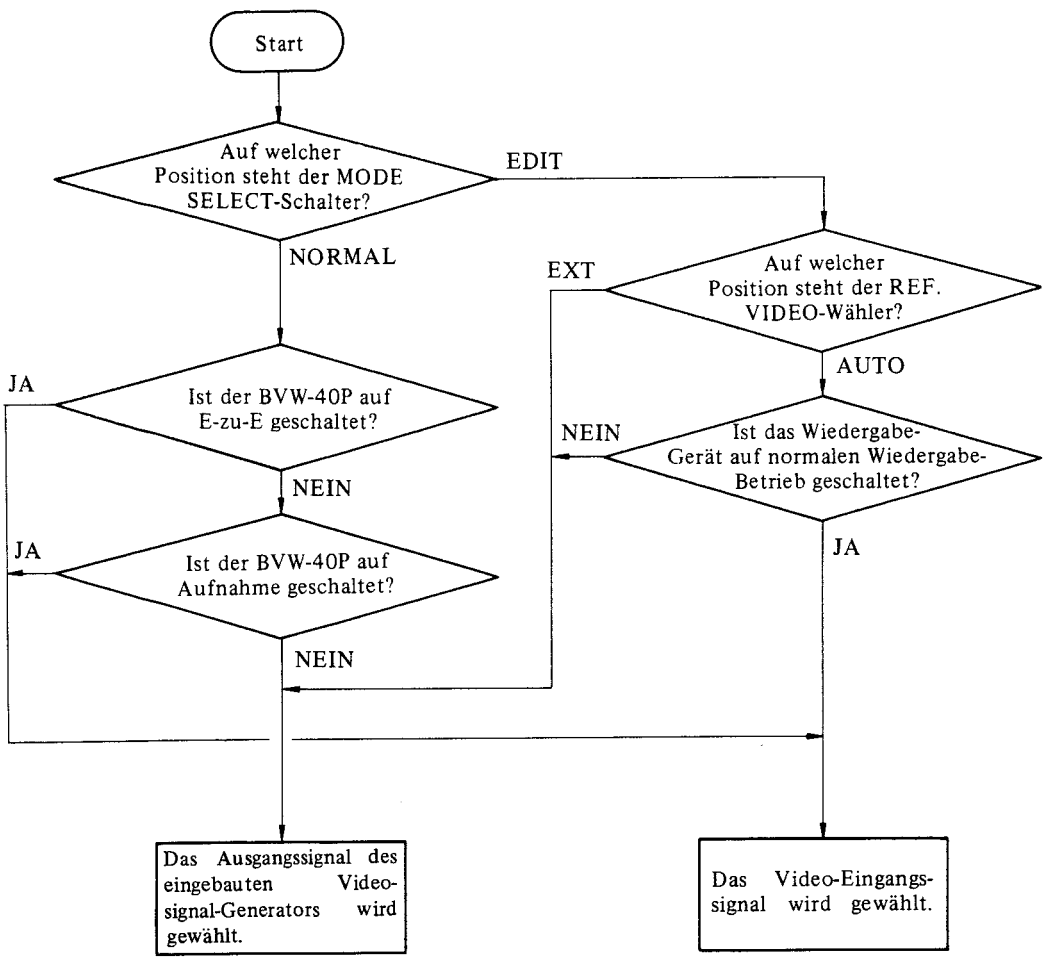
1-4-2. Synchron-Betrieb mit dem eingebauten Videosignal-Generator

Falls ein Bezugssignal anliegt, wird der eingebaute Videosignal-Generator mit diesem synchronisiert. Das folgende Diagramm zeigt, welches Signal als Bezugssignal verwendet wird.



1-4-3. Wahl des Bezugssignals für das Servo-System

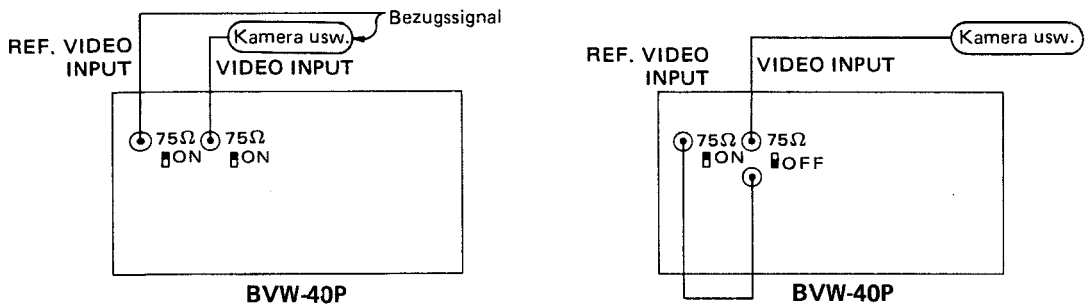
Als Bezugssignal für das Servo-System wird automatisch zwischen dem Video-Eingangssignal (am INPUT SELECT-Schalter gewählt) und dem Ausgangssignal des eingebauten Videosignal-Generators gewählt. Das folgende Diagramm zeigt, welches Signal jeweils gewählt wird.



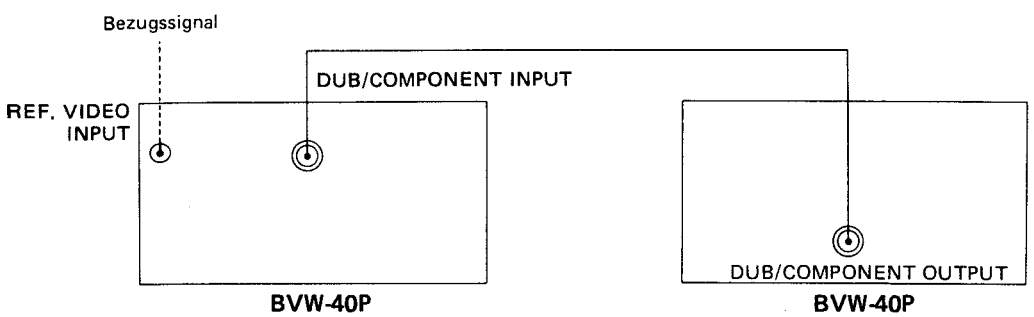
1-4-4. Anschluß des Bezugssignals

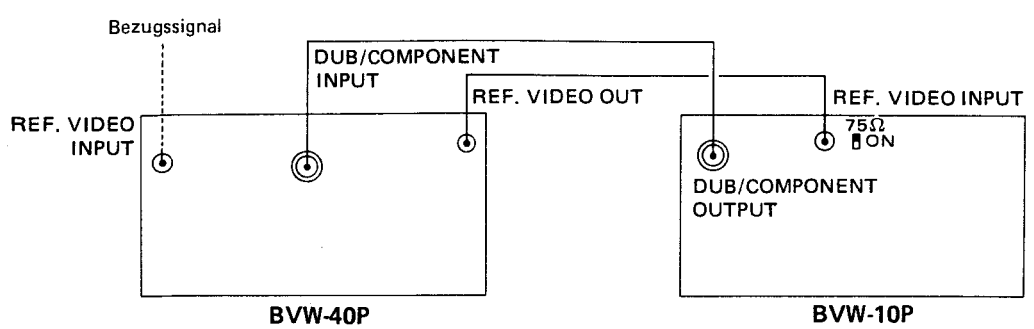
Aufnahme

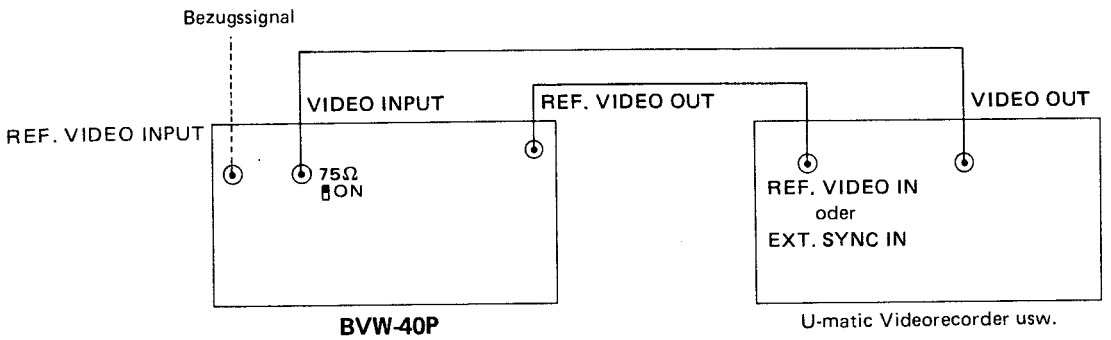
(1) Aufnahme des Signals von einer Kamera, einem Signalgenerator usw.

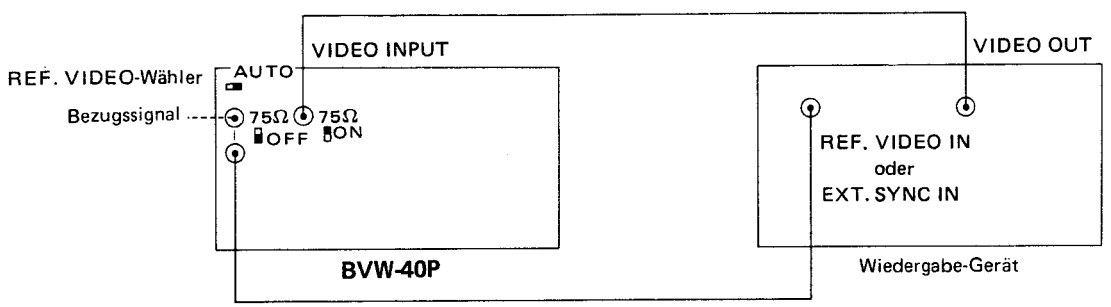


(2) Aufnahme des Signals von einem Videorecorder

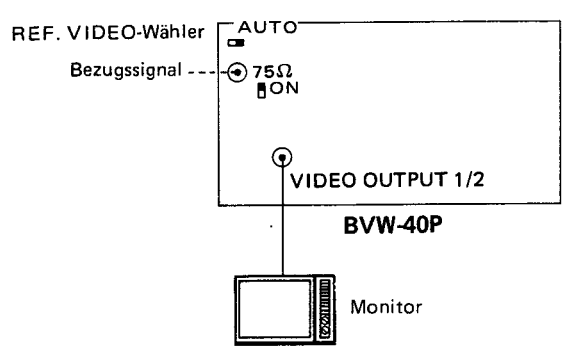





Bezugssignal
VIDEO INPUT
REF. VIDEO OUT
VIDEO OUT
REF. VIDEO INPUT
75Ω
ON
REF. VIDEO IN
oder
EXT. SYNC IN
BVW-40P
U-matic Videorecorder usw.


VIDEO INPUT
VIDEO OUT
REF. VIDEO-Wähler
AUTO
Bezugssignal
75Ω
75Ω
OFF
ON
REF. VIDEO IN
oder
EXT. SYNC IN
BVW-40P
Wiedergabe-Gerät

Wiedergabe


REF. VIDEO-Wähler
AUTO
Bezugssignal
75Ω
ON
VIDEO OUTPUT 1/2
BVW-40P
Monitor

1-5. AUFNAHME

1-5-1. Vorbereitungen

Aufnahme des FBAS-Signals

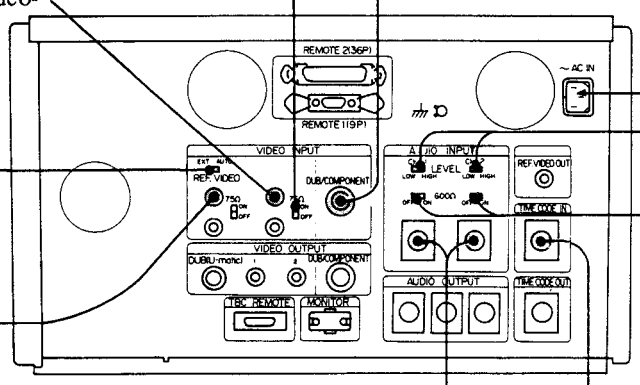
75 Ω-Abschlußschalter
Verwendung eines Geräts → ON
Verwendung des Durchschleifausganges → OFF
Verwendung des Geräts in einer Brückenschaltung → ON

Video-Eingang (von Videokamera, Videorecorder usw.)

REF. VIDEO-Wähler
Normalerweise auf AUTO stellen. Zur Synchronisation mit einem externen Bezugssignal auf EXT. stellen.

Bezugssignal

Überspielen eines FBAS-Signals
Video-Eingang (von BVW-10P, BVW-40P usw.)



Netzanschluß

LEVEL-Wähler
Mikrofon-Eingang → LOW
Line-Eingang → HIGH

600 Ω-Abschlußschalter
Für 600-Ohm-Eingang → ON
Für 10-kOhm-Eingang → OFF

Ton-Eingang

Zeitcode-Eingang

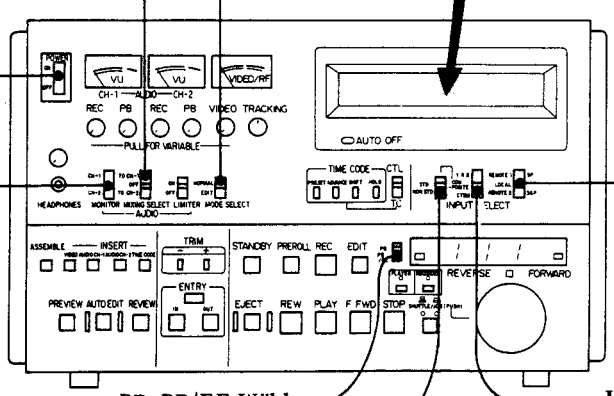
MODE SELECT-Schalter
→ NORMAL

MIXING SELECT-Schalter
→ OFF

Eine Cassette einlegen.

POWER-Schalter
→ ON

MONITOR-Wähler
→ MIX



Fernbedienungswähler
→ LOCAL

PB. PB/EE-Wähler
→ PB/EE

INPUT SELECT-Schalter
Zum Aufnehmen des am VIDEO INPUT-Anschluß angeschlossenen Videosignals → COMPOSITE
Zum Aufnehmen des an den DUB/COMPONENT-Eingang angeschlossenen Drei-Komponenten-Signals (Y, R-Y, B-Y) → Y-R, B
Zum Aufnehmen des am DUB/COMPONENT-Eingang angeschlossenen CTDM-Signals → CTDM

STD/NON STD-Wähler
Wenn der INPUT SELECT-Schalter auf COMPOSITE gestellt ist, diesen Wähler wie folgt einstellen.

Entspricht das am VIDEO INPUT-Anschluß angeschlossene Signal der PAL-Norm → STD
Entspricht das am VIDEO INPUT-Anschluß angeschossene Signal nicht der PAL-Norm → NON STD

1-5-2. Betrieb

1. Videopegel einstellen.

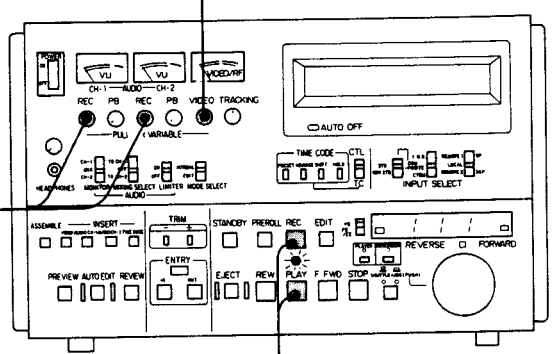
Automatische Einstellung

Lassen Sie den VIDEO-Pegelregler gedrückt. Die Aufnahme erfolgt dann mit dem richtigen Pegel.

Manuelle Einstellung

Zum Aufnehmen des FBAS-Signals ziehen Sie den VIDEO-Pegelregel heraus und stellen Sie ihn so ein, daß das VIDEO/RF-Meter bis in den blauen Bereich ausschlägt.

Ein CTDM- und Komponenten-Videosignal kann nicht manuell eingestellt werden.



2. Ton-Aufnahmepegel einstellen.

Voreingestellter Pegel

Lassen Sie den REC-Pegelregler gedrückt. Die Aufnahme des Tonsignals wird dann mit dem voreingestellten Pegel (0 VU bei Eingangssignal von +4 dBm) durchgefürt.

Manuelle Einstellung

Stellen Sie den LIMITER-Schalter auf OFF, ziehen Sie die REC-Pegelregler und stellen Sie sie so ein, daß die VU-Meter maximal bis ca. 0 VU ausschlagen.

Zum Einschalten des Begrenzers stellen Sie den LIMITER-Schalter auf ON.

3. PLAY- und REC-Tasten gleichzeitig drücken.

Die Aufnahme beginnt und die REC- sowie die PLAY-Tasten leuchten auf. Sobald die Servoverkopplung erreicht ist, leuchtet der SERVO-Indikator.

Stoppen der Aufnahme

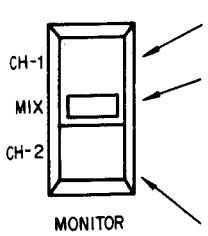
Drücken Sie dazu die STOP-Taste. Die Taste leuchtet dann auf.

- Sobald das Band am Ende angelangt ist, spult es automatisch zurück und stoppt dann am Anfang.

Überwachung des Video- und Tonsignals

Bild und Ton des Videomonitors können am PB. PB/EE-Wähler gewählt werden: Wiedergabe-Video/Tonsignal (PB) oder Eingangs-Video/Tonsignal in der E-zu-E-Funktion (EE).

Der mitzuhörende Tonkanal wird am MONITOR-Wähler gewählt.



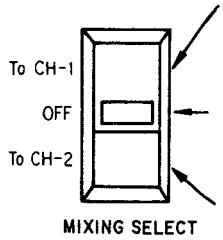
Tonkanal 1

Beide Kanäle über die HEADPHONES-Buchse und Mischsignale aus beiden Kanälen über AUDIO OUTPUT MONITOR- sowie MONITOR-Anschluß.

Tonkanal 2

Aufnahme des Mischsignals aus Tonkanal 1 und 2

Das Tonkanal-1-Signal und Kanal-2-Signal kann beim Aufnehmen gemischt werden. Wenn der MIXING SELECT-Schalter wie folgt eingestellt wird, kann das Mischsignal auch wahlweise auf Kanal 1 oder Kanal 2 angenommen werden:

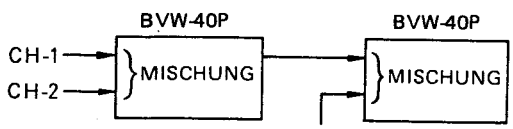


Das Mischsignal wird auf Kanal 1 aufgezeichnet. (Tonkanal-2-Signal wird auf Kanal 2 aufgezeichnet.)

Tonkanal-1-Signal und Kanal-2-Signal werden auf den entsprechenden Kanälen aufgezeichnet.

Das Mischsignal wird auf Kanal 2 aufgezeichnet. (Tonkanal-1-Signal wird auf Kanal 1 aufgezeichnet.)

- Tonkanal 1 und 2 werden beim Aufnehmen mit gleichem Pegel gemischt.
- Beim Anschluß von zwei BVW-40P können drei Tonsignale gemischt werden.



(E-E- oder WG-Betrieb)

Bandschutz

Bleibt das Gerät länger als acht Minuten in der Stopp-Funktion, so wird die Bereitschafts-Funktion automatisch abgeschaltet (Kopftrommel bleibt stehen), um das Band sowie die Video-Köpfe zu schonen. Wenn das Band bei Suchlaufbetrieb für mehr als acht Minuten gestoppt wird, bewegt es sich mit 1/30 Normalgeschwindigkeit in Vorwärtsrichtung. Zum Umschalten in die gewünschte Betriebsart (außer Stopp-Funktion) drücken Sie dann die entsprechende Taste. Durch Drücken der STANDBY-Taste schaltet das Gerät in die Stopp-Funktion.

Kondenswasseransammlung

Bei Ansammlung von Kondenswasser bleiben die Kopftrommel- und Capstan-Motoren stehen, die Cassette wird ausgeworfen, und der AUTO OFF-Indikator an der Vorderseite leuchtet auf. Danach dreht sich die Kopftrommel dann weiter. Warten Sie mit dem Betrieb des Geräts jedoch noch, bis der AUTO OFF-Indikator nach ca. zehn Minuten erlischt.

1-5-3. Zeitcode-Aufnahme

Der Zeitcode wird zusammen mit den Video- und Tonsignalen aufgenommen. Wahlweise kann der vom eingebauten Zeitcode-Generator erzeugte Zeitcode, der Zeitcode von einem externen Zeitcode-Generator oder der von einem anderen Videorecorder wiedergegebene Zeitcode aufgenommen werden.

Zeitcode-Erzeugung

Der eingebaute Zeitcode-Generator besitzt zwei Betriebsarten (REC RUN und FREE RUN).

REC RUN-Betriebsart

Der Zeitcode-Generator erzeugt nur dann einen Zeitcode, wenn der Videorecorder auf Aufnahme geschaltet ist. Sobald die Aufnahme startet, beginnt auch die Erzeugung des Zeitcodes. Am Ende der Aufnahme endet dann auch die Zeitcode-Erzeugung. Für REC RUN-Betriebsart stellen Sie den REC RUN/FREE RUN-Wähler der TC-28 Leiterplatte auf REC RUN.

FREE RUN-Betriebsart

Der Zeitcode wird fortlaufend, unabhängig von der Videorecorder-Betriebsart erzeugt. Wird der Zeitcode-Generator auf die Normalzeit eingestellt, so wird die Aufnahmezeit auf dem Band aufgezeichnet. Zur Wahl der FREE RUN-Betriebsart stellen Sie den REC RUN/FREE RUN-Wähler auf FREE RUN.

Aufnehmen des vom eingebauten Zeitcode-Generator erzeugten Zeitcodes.

Voreinstellen des Generators auf die gewünschte Zeit.

1. Stellen Sie den EXT/INT-Wähler auf INT.
2. Stellen Sie den REC RUN/FREE RUN-Wähler auf die entsprechende Position.
3. Stellen Sie den REGEN/PRESET-Wähler auf PRESET.
4. Drücken Sie die HOLD-Taste. Der HOLD-Indikator leuchtet, und die ganz links befindliche Stelle der Zeitzähler-Anzeige blinkt.
5. Drücken Sie die ADVANCE-Taste zur Einstellung der gewünschten Zahl an der blinkenden Stelle.
6. Drücken Sie die SHIFT-Taste, so daß die rechts daneben liegende Stelle zu blinken beginnt.
   Wiederholen Sie die Schritte 5 und 6, bis alle Stellen eingegeben sind.
7. Drücken Sie die PRESET-Taste. Die ganz rechts befindliche Stelle hört dann auf zu blinken.
   Befindet sich der Zeitcode-Generator in der FREE RUN-Betriebsart, so beginnt die Erzeugung des Zeitcodes.
   Befindet sich der Zeitcode-Generator in der REC RUN-Betriebsart, so startet die Erzeugung des Zeitcodes, sobald der Videorecorder mit der Aufnahme beginnt.

Voreinstellung des von einem externen Zeitcode-Generator erzeugten Zeitcodes.

1. Schließen Sie den externen Zeitcode-Generator am TIME CODE IN-Anschluß des Anschlußfeldes an.
2. Stellen Sie den EXT/INT-Wähle auf EXT.
3. Stellen Sie den REC RUN/FREE RUN-Wähler auf FREE RUN.
4. Stellen Sie den REGEN/PRESET-Wähler auf PRESET.
5. Schalten Sie den Videorecorder in die Stopp-Funktion und drücken Sie die REC-Taste. Der eingebaute Zeitcode-Generator beginnt dann mit der Erzeugung des Zeitcodes, wobei dieser mit dem Ausgangssignal des externen Zeitcode-Generators synchronisiet wird. Der Zeitcode wird auf der Zeitzähler-Anzeige angezeigt.
6. Drücken Sie die STOP-Taste.
7. Stellen Sie den EXT/INT-Wähler auf INT. Der eingebaute Zeitcode-Generator fährt mit der Erzeugung des Zeitcodes fort, nachdem der externe Zeitcode-Generator abgetrennt ist.

- Mit der beschriebenen Methode können leicht die Zeitcode-Generatoren von zwei oder mehr BVW-40P auf den gleichen Zeitcode eingestellt werden.

Aufnahme des Ausgangssignals von einem externen Zeitcode-Generator oder Wiedergabe des Zeitcodes von einem anderen Videorecorder.

1. Schließen Sie das Zeitcode-Ausgangssignal des externen Zeitcode-Generators bzw. des anderen Videorecorders an den TIME CODE IN-Anschluß am Anschlußfeld an.
2. Stellen Sie den EXT/INT-Wähler auf EXT.
3. Stellen Sie den REGEN/PRESET-Wähler wie folgt ein.
   Zum direkten Aufnehmen des Zeitcodes vom TIME CODE IN-Anschluß: PRESET
   Zum Aufnehmen des Zeitcodes vom eingebauten Zeitcode-Generator, wobei dieser mit dem am TIME CODE IN-Anschluß angeschlossenen Zeitcode synchronisiert ist: REGEN

Überspielen des Zeitcodes

Zur Überspielung des Zeitcodes gibt es zwei Möglichkeiten:

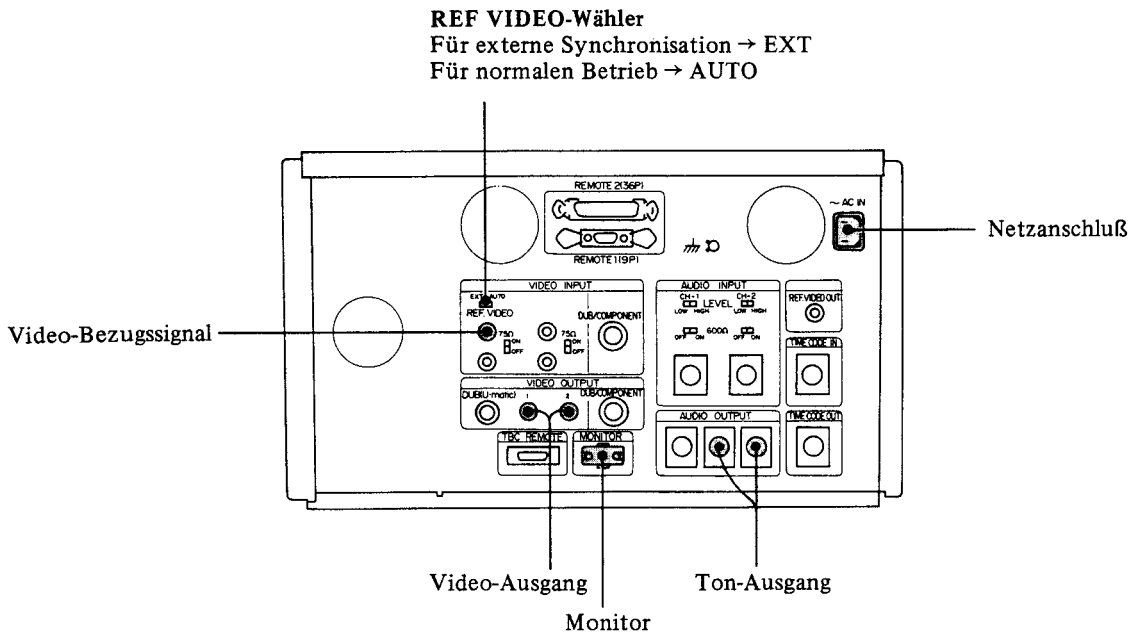
A) Direktes Aufnehmen des Zeitcodes
B) Aufnehmen des Zeitcodes vom eingebauten Zeitcode-Generator, wobei dieser mit dem wiedergegebenen Zeitcode synchronisiert wird.

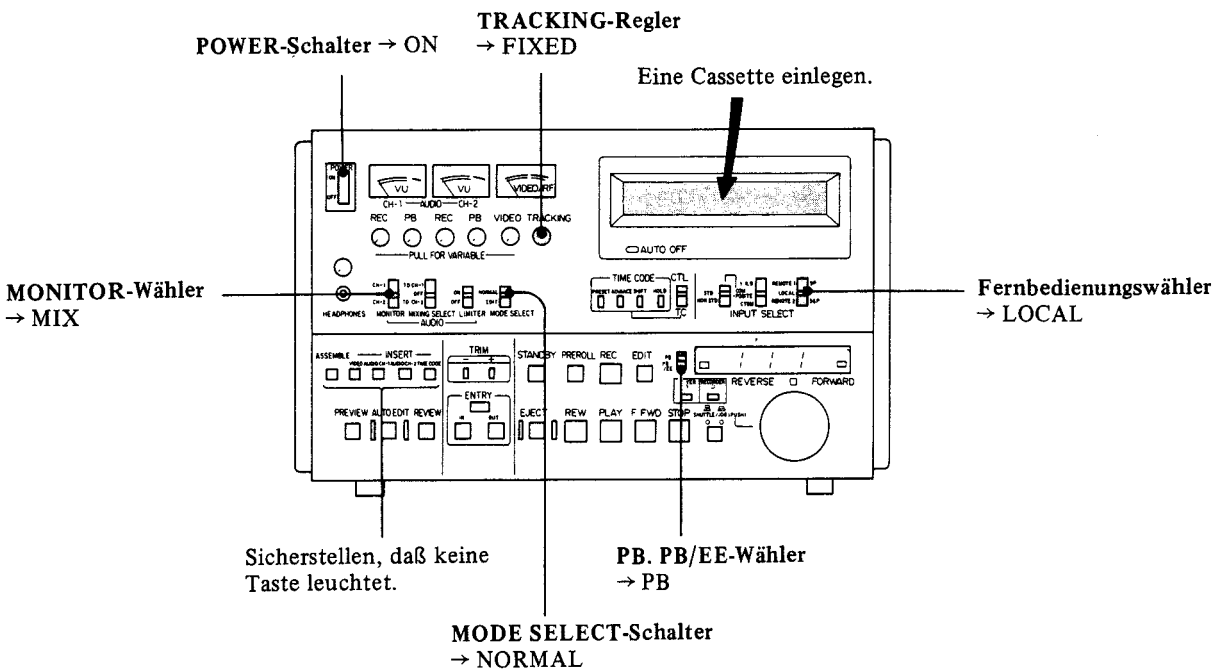
Wir empfehlen die Möglichkeit B), da beim Überspielen dann keinerlei Verzerrungen auftreten können.

1. Verbinden Sie den Zeitcode-Ausgang des Wiedergabe-Geräts mit dem TIME CODE IN-Anschluß am Anschlußfeld.
2. Stellen Sie den EXT/INT-Wähler auf EXT.
3. Stellen Sie den REGEN/PRESET-Wähler wie folgt ein:
   Zum direkten Aufnehmen des Wiedergabe-Zeitcodes: PRESET
   Zum Aufnehmen des Zeitcodes vom eingebauten Zeitcode-Generator: REGEN
4. Schalten Sie das Wiedergabe-Gerät auf Wiedergabe und das Aufnahme-Gerät auf Aufnahme.

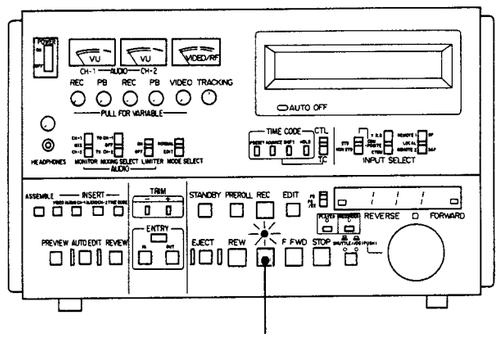
1-6. WIEDERGABE

1-6-1. Vorbereitungen





1-6-2. Betrieb



Zum Starten der Wiedergabe die PLAY-Taste drücken. Nach ca. 0,6 Sekunden ist die Servoverrieglung erreicht und der SERVO-Indikator leuchtet. Während der Wiedergabe leuchten die PLAY-Taste und der SERVO-Indikator.

Stoppen der Wiedergabe

Drücken Sie dazu die STOP-Taste.

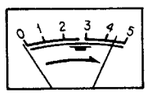
Die Wiedergabe stoppt dann, und die STOP-Taste leuchtet.

- Sobald das Band am Ende angelangt ist, spult es automatisch zurück und stoppt am Anfang.

Spurlageneinstellung

Stellen Sie normalerweise den TRACKING-Regler auf FIXED.

Ist das Wiedergabebild gestört, stellen Sie den TRACKING-Regler so ein, daß das VIDEO/RF-Meter möglichst weit nach rechts ausschlägt.





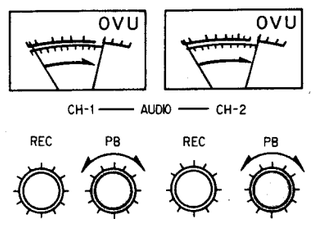
Einstellung des Ton-Wiedergabepegels

Voreingestellter Pegel

Lassen Sie hierzu die PB-Regler gedrückt. Bei Wiedergabe eines normalen Signals erhält man dann einen Signalpegel von +4 dBm* am AUDIO OUTPUT-Anschluß (wenn dieser mit 600 Ohm abgeschlossen ist).

Manuelle Einstellung

Ziehen Sie die PB-Pegelregler heraus und stellen Sie sie so ein, daß die VU Meter maximal bis ca. 0 VU ausschlagen.



* Der voreingestellte Pegel kann in einem Bereich von 0 bis +6 dB gegen +4 dBm geändert werden. Genaueres dazu siehe Abschnitt 2.

Überwachung des Wiedergabe-Video- und Wiedergabe-Tonsignals

Diese Überwachung kann genau wie beim Aufnehmen durchgeführt werden.

1-6-3. Zeitcode-Wiedergabe

Bei der Wiedergabe eines Bandes, auf dem ein Zeitcode aufgezeichnet ist, wird dieser vom eingebauten Zeitcode-Leser gelesen und das Zeitcodesignal dem TIME CODE OUT-Anschluß des Anschlußfeldes zugeleitet.

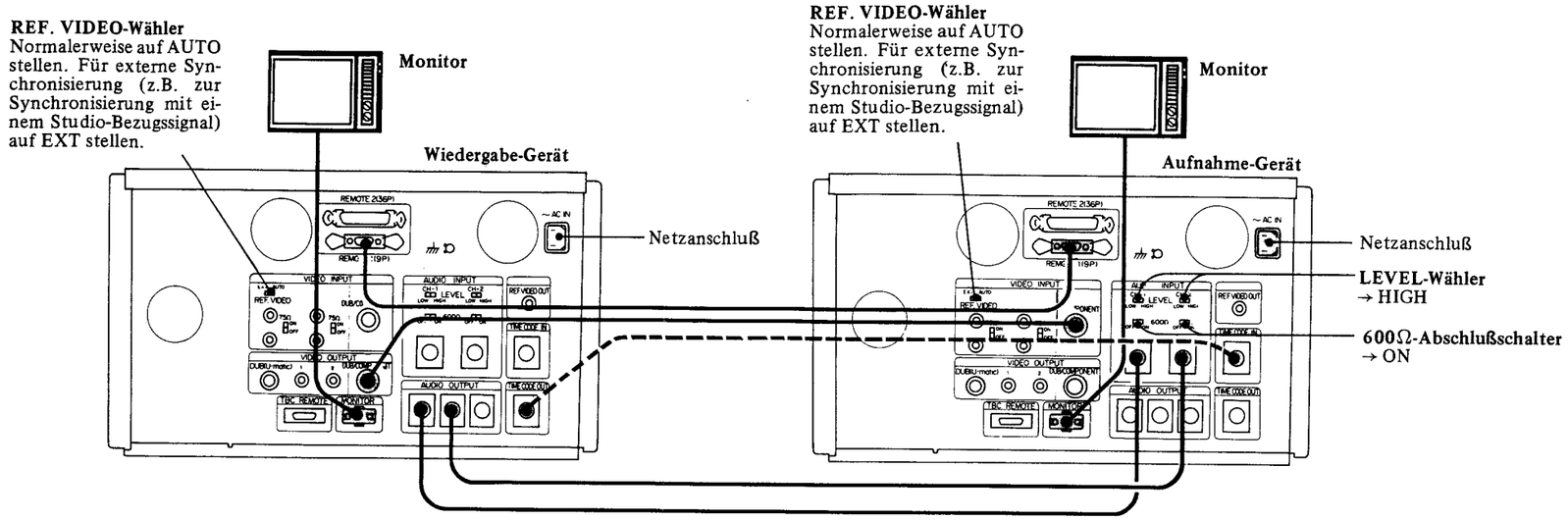
Steht der CTL/TC-Wähler auf TC, so wird der wiedergegebene Zeitcode auf der Zeitzähler-Anzeige angezeigt.

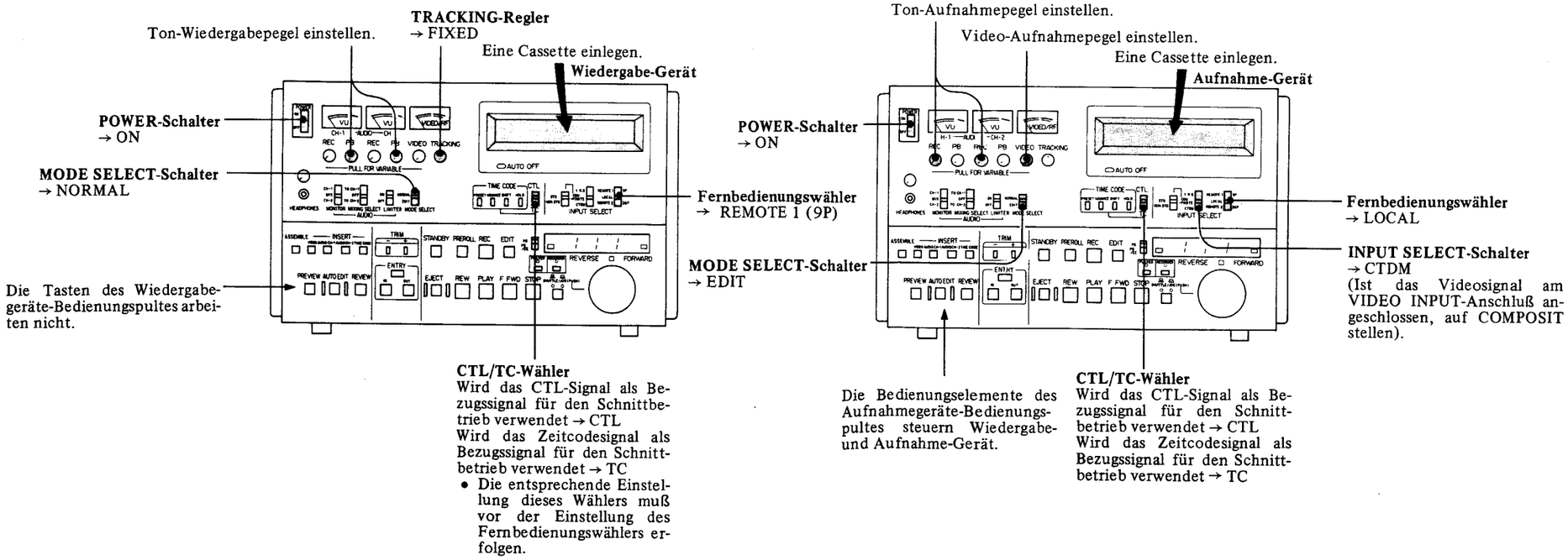
Regenerier-Betriebsart (REGEN)

Steht der REGEN/PRESET-Wähler auf REGEN, der EXT/INT-Wähler auf INT und wird das Band mit Normalgeschwindigkeit wiedergegeben, so erzeugt der eingebaute Generator einen mit dem wiedergegebenen Zeitcode synchronisierten Zeitcode. Dieser Zeitcode gelangt dann zum TIME CODE OUT-Anschluß. Da hierbei Verzerrungen des Zeitcodesignals vermieden werden, empfiehlt sich diese Betriebsart, wenn der Zeitcode zu einem anderen Videorecorder geleitet werden soll.

1-7. SCHNEIDEN

1-7-1. Vorbereitungen





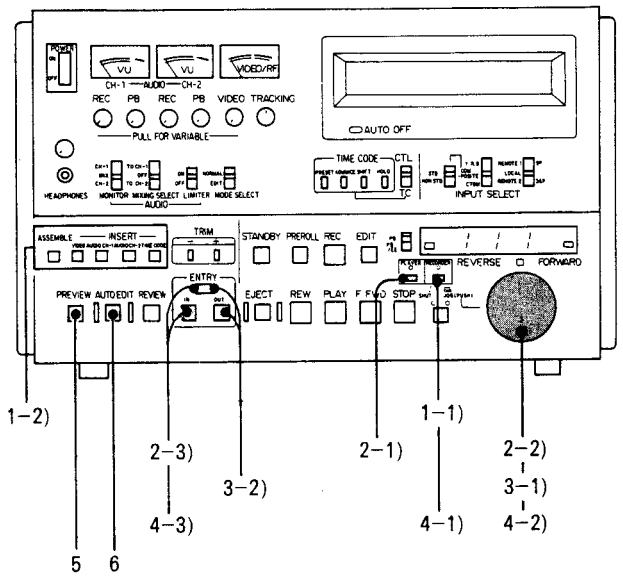
Bezugssignal für Schnittbetrieb

Um den Zeitcode als Bezugssignal zu verwenden, stellen Sie den CTL/TC-Wähler auf TC und um das CTL-Singal zu verwenden, auf CTL. Achten Sie darauf, daß beim Einstellen des CTL/TC-Wählers der Fernbedienungswähler auf LOCAL gestellt ist. Steht dieser Wähler auf REMOTE 1 oder REMOTE 2, so ist kein Einstellen des CTL/TC-Wählers möglich.

- Nach Eingabe der Schnittpunkte darf der CTL/TC-Wähler erst umgestellt werden, wenn der Schnitt beendet ist.
- Um den Zeitcode als Bezugssignal zu verwenden, sollte er fortlaufend auf dem Band aufgezeichnet sein, da ansonsten der Schnitt nicht exakt ausgeführt werden kann.
  Der Schnitt kann jedoch auch ausgeführt werden, wenn der Zeitcode nicht fortlaufend aufgezeichnet ist. Ist in der Schnittvoreinlaufphase kein fortlaufender Zeitcode aufgezeichnet, so wird automatisch das CTL-Signal als Bezugssignal herangezogen.

Wenn zwei BVW-40P mit einem Überspielkabel zusammengeschaltet werden und der INPUT SELECT-Schalter des Aufnahme-Geräts auf CTDM gestellt ist, so gelangt ein Befehl zum Abschalten der Kopftrommel-Voreilung zum Wiedergabe-Gerät und die V-Austastung des Signals vom Wiedergabe-Gerät wird um 8H verschoben. Wenn das Wiedergabe-Gerät verwendet wird, um das Signal zu der nächsten Stufe zu leiten, stellen Sie auf jeden Fall den INPUT SELECT-Schalter des Aufnahme-Geräts auf COMPOSIT oder Y–R, B und lassen Sie das Aufnahme-Gerät eingeschaltet.

1-7-2. Betrieb



1. Wahl der Schnitt-Betriebsart

1) Drücken Sie die RECORDER-Taste. Die RECORDER-Lampe leuchtet dann auf.
2) **Für Anfügschnitt-Betrieb:** Drücken Sie die ASSEMBLE-Taste, so daß diese aufleuchtet. Bei Anfügschnitt-Betrieb wird der Zeitcode automatisch aufgezeichnet. Achten Sie darauf, den eingebauten Zeitcode-Generator zurückzustellen. (Siehe unter „1-5-3. Zeitcode-Aufnahme".)
   Für Einfügschnitt-Betrieb: Drücken Sie die INSERT-Tasten der Signale, die eingefügt werden sollen. Die gedrückte(n) Taste(n) leuchtet (leuchten). Wird der Zeitcode als Bezugssignal für den Schnittbetrieb verwendet, so ist kein Einfügen möglich.

2. Wahl des IN-Punktes für das Wiedergabe-Gerät

1) Drücken Sie die PLAYER-Taste. Der PLAYER-Indikator leuchtet dann auf, und die IN- sowie die OUT-Taste beginnt langsam zu blinken.
2) Suchen Sie mit dem Suchlaufknopf den IN-Punkt auf.
3) Drücken Sie die ENTRY- und IN-Tasten gleichzeitig. Die IN-Taste leuchtet dann auf, und der auf der Zeitzähleranzeige angezeigte Wert wird als IN-Punkt eingegeben.

- Der erste IN-Punkt muß sich mehr als 5 Sekunden hinter dem Aufnahme-Startpunkt des Bandes befinden.

3. Wahl des OUT-Punktes für das Wiedergabe-Gerät

1) Suchen Sie den OUT-Punkt mit dem Suchlaufknopf auf.
2) Drücken Sie die ENTRY- und OUT-Tasten gleichzeitig. Die OUT-Taste leuchtet dann auf, und der auf der Zeitzähler-Anzeige angezeigte Wert wird als OUT-Punkt eingegeben.

- Der OUT-Punkt muß sich hinter dem IN-Punkt befinden. Liegt der OUT-Punkt vor dem IN-Punkt, so wird der eingegebene IN-Punkt gelöscht und der automatische Schnittbetrieb nicht richtig ausgeführt.

4. Wahl des IN-Punktes für das Aufnahme-Gerät

1) Drücken Sie die RECORDER-Taste. Die RECORDER-Lampe leuchtet dann auf, und die IN-Taste beginnt langsam zu blinken.
2) Suchen Sie den IN-Punkt mit dem Suchlaufknopf auf.
3) Drücken Sie die ENTRY- und IN-Tasten gleichzeitig. Die IN-Taste leuchtet dann auf, und der auf der Zeitzähler-Anzeige angezeigte Wert wird als IN-Punkt eingegeben.

- Wenn der OUT-Punkt am Wiedergabe-Gerät eingegeben wurde, braucht er nicht noch zusätzlich am Aufnahme-Gerät eingegeben zu werden.

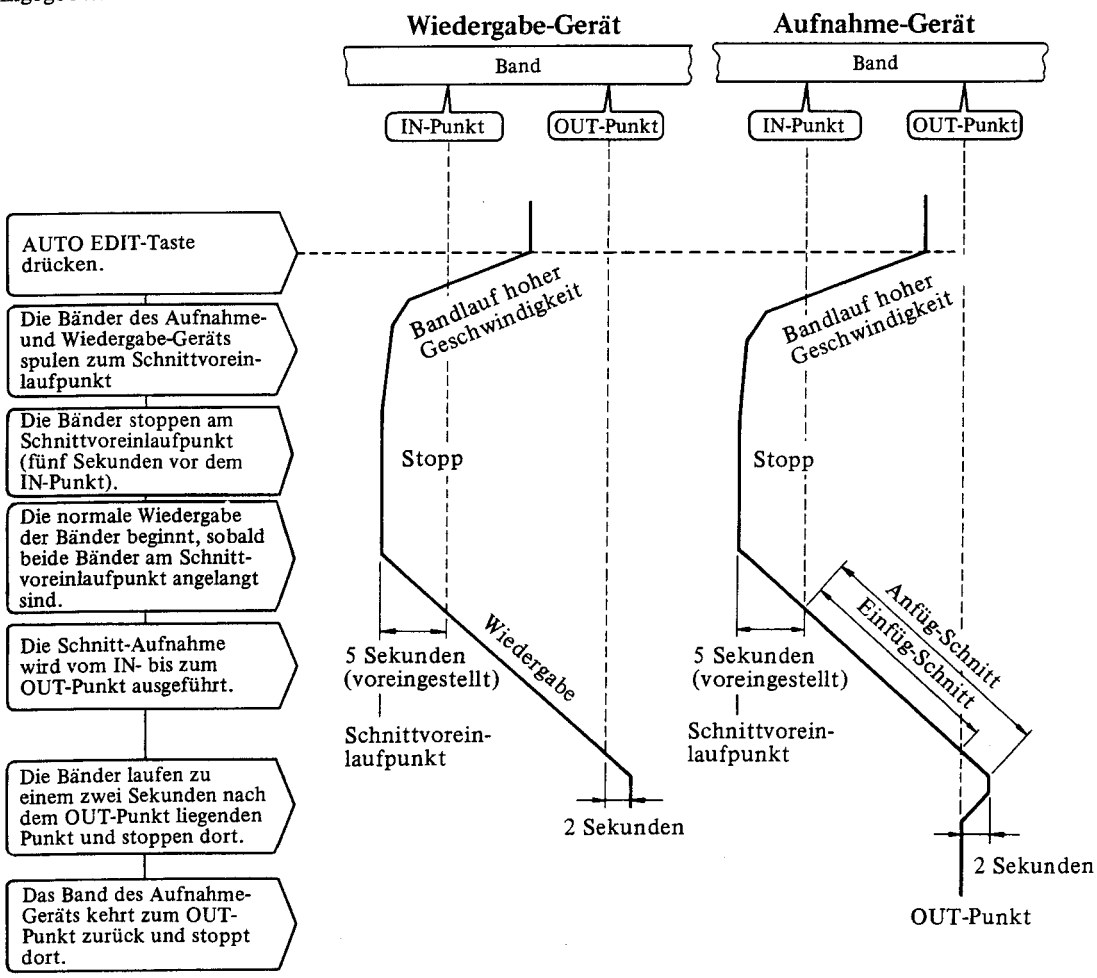
5. Drücken Sie die PREVIEW-Taste, um den Schnitt probeweise auszuführen.

Die PREVIEW-Taste leuchtet auf, und der Schnitt wird probeweise ausgeführt (Vorschau). Beobachten Sie den Monitor des Aufnahme-Geräts. Das Bild des Wiedergabe-Geräts ist zwischen IN- und OUT-Punkten in der E-zu-E-Funktion zu sehen. Falls notwendig ändern Sie die Schnittpunkte und drücken Sie die PREVIEW-Taste erneut.

Zum Anhalten des Bandes während dieses Vorschau-Betriebs drücken Sie die STOP-Taste. Drücken Sie dann die PREROLL-Taste, um das Band zum Schnitt-voreinlaufpunkt zu spulen. Durch Drücken der AUTO EDIT-Taste kann der automatische Schnittvorgang gestartet werden. Das Band spult dann zum Schnitt-voreinlaufpunkt, und die Schnitt-Aufnahme beginnt.

6. Nach Festlegung der Schnittpunkte drücken Sie die AUTO EDIT-Taste.

Die Schnitt-Aufnahme wird dann wie unten gezeigt ausgeführt.



Überprüfung des Schnittergebnisses

Nach der Schnitt-Aufnahme drücken Sie die REVIEW-Taste, um das Schnittergebnis auf dem Monitor des Aufnahme-Geräts zu überprüfen (Rückschau). Nach dem Rückschau-Betrieb stoppt das Band am OUT-Punkt. Zum Stoppen des Rückschau-Betriebs drücken Sie die STOP-Taste.

Überwachung der Schnitt-Aufnahme

Die Aufnahme kann in einem Bereich von 5 Sekunden vor dem IN-Punkt bis 2 Sekunden nach dem OUT-Punkt auf dem Monitor des Aufnahme-Geräts überwacht werden. Wenn bei Einfügschnittbetrieb CTL-Signale auf dem Band des Aufnahme-Geräts fehlen, erscheint das Wiedergabebild des Aufnahme-Geräts und zeigt damit an, daß die Schnitt-Aufnahme nicht richtig an diesem Teil ausgeführt wurde.

Stoppen der Schnitt-Aufnahme

Um die Schnitt-Aufnahme vor dem OUT-Punkt zu stoppen, drücken Sie die OUT- und ENTRY-Taste gleichzeitig.

Am Ende der Schnitt-Aufnahme . . . .

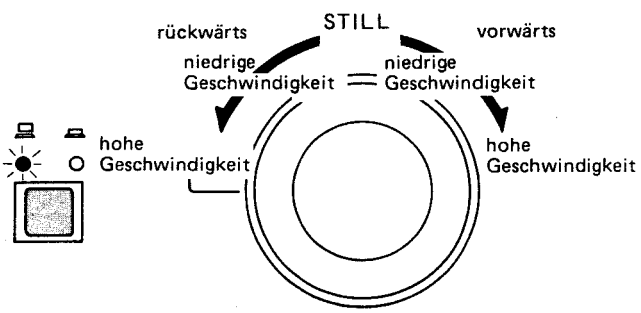
Wenn die Schnitt-Aufnahme einer Szene beendet ist, suchen Sie die IN- und OUT-Punkte der nächsten Szene auf und geben Sie diese ein, wie auf den vorhergehenden Seiten beschrieben. Der OUT-Punkt einer Szene kann automatisch zum nächsten IN-Punkt des Aufnahme-Geräts gemacht werden.

Aufsuchen eines Schnittpunktes

Drehen Sie den Suchlaufknopf zum Aufsuchen eines Schnittpunktes nach rechts und links. Wenn der RECORDER-Indikator leuchtet, wird der Punkt auf dem Aufnahme-Gerät gesucht und wenn der PLAYER-Indikator leuchtet, wird der Punkt auf dem Wiedergabe-Gerät gesucht. Legen Sie die Schnittpunkte unter Beobachtung der Monitorbilder fest. Wenn der SHUTTLE-Indikator nicht leuchtet, drücken Sie den Suchlaufknopf hinein.

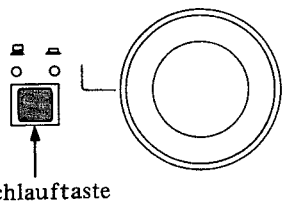
1. Schalten Sie den Videorecorder auf Shuttle-Betrieb (SHUTTLE-Indikator leuchtet) und suchen Sie den gewünschten Punkt mit dem Suchlaufknopf auf. Wird der Knopf über den Klickpunkt hinausgedreht, so erhält man 10fache Normalgeschwindigkeit. Bei Erreichen von 10facher Normalgeschwindigkeit wird das Bild kurzzeitig unterbrochen oder gestört.

- Nach Einschalten des Geräts ist der Knopf auf jeden Fall zunächst in die Mittelposition zu stellen, bevor er verwendet wird.



2. Durch Hineindrücken des Knopfes wird der Videorecorder auf Jog-Betrieb geschaltet (JOG-Indikator leuchtet auf).
3. Drehen Sie den Knopf. Die Wiedergabegeschwindigkeit hängt nun von der Drehgeschwindigkeit des Knopfes ab. Suchen Sie den Schnittpunkt exakt auf.

Verwendung des Suchlaufknopfes



Während des Betriebs kann das Gerät durch Drücken des Suchlaufknopfes in die Suchlauf-Funktion geschaltet werden, ohne daß die Suchlauftaste gedrückt wird. Die Suchlauftaste ist für folgende Betriebsfunktionen zu verwenden.

Wiedergabestart mit einer voreingestellten Geschwindigkeit

1. Stellen Sie am Suchlaufknopf die gewünschte Wiedergabegeschwindigkeit ein.
2. Drücken Sie die PLAY- oder STOP-Taste.
3. Drücken Sie die Suchlauftaste. Die Wiedergabe beginnt dann mit der im Schritt 1 eingestellten Geschwindigkeit.

Verhindern von versehentlichem Umschalten in die Suchlauf-Funktion

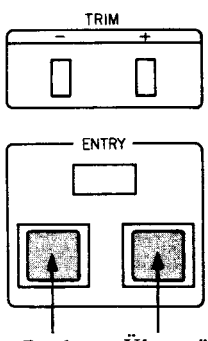
Der Suchlaufknopf kann so eingestellt werden, daß er nur durch Drücken der Suchlauftaste aktiviert wird. Dadurch wird verhindert, daß am Videorecorder versehentlich in die Suchlauf-Funktion geschaltet wird. (Genaueres dazu siehe unter „SEARCH DIAL-Schalter" im Abschnitt 2.)

Überprüfung der IN- und OUT-Punkte

Zum Überprüfen der IN- und OUT-Punkte können diese auf der Zeitzähler-Anzeige angezeigt werden.

Überprüfung der IN- und OUT-Punkte des Wiedergabe-Geräts

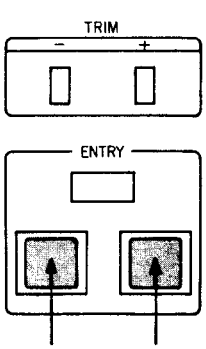
Drücken Sie die PLAYER-Taste und halten Sie anschließend die IN- oder OUT-Taste gedrückt. Der IN- bzw. OUT-Punkt wird dann angezeigt.



Überprüfung des IN-Punktes Überprüfung des OUT-Punktes

Überprüfung der IN- und OUT-Punkte des Aufnahme-Geräts

Drücken Sie die RECORDER-Taste und halten Sie anschließend die IN- oder OUT-Taste gedrückt. Der IN- bzw. OUT-Punkt wird dann angezeigt.



Überprüfung des IN-Punktes Überprüfung des OUT-Punktes

Aufsuchen der IN- und OUT-Punkte

Die IN- und OUT-Punkte des Aufnahme- und Wiedergabe-Geräts können leicht aufgefunden werden.
Drücken Sie dazu die RECORDER- bzw. PLAYER-Taste und die PREROLL-Taste zusammen mit der IN- bzw. OUT-Taste. Wird die IN-Taste gedrückt, läuft das Band zum IN-Punkt und stoppt dort. Wird die OUT-Taste gedrückt, läuft das Band zum OUT-Punkt und stoppt dort.

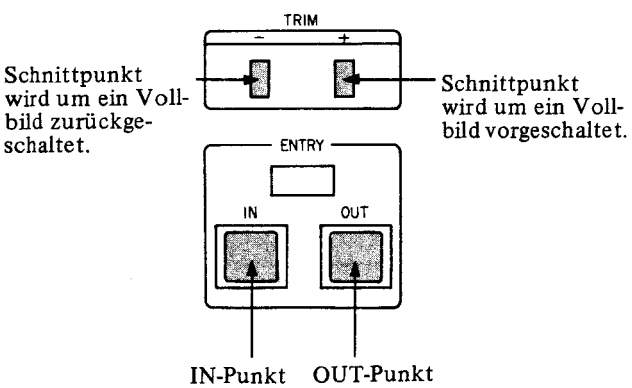
Korrektur des Schnittpunktes

Der Schnittpunkt kann auf zwei Arten korrigiert werden: Weiterschaltung des Punktes um ein Vollbild oder Eingabe eines neuen Schnittpunktes.

Korrektur des Schnittpunktes um Vollbilder

IN- und OUT-Punkte können um Vollbilder korrigiert werden.

1. Drücken Sie die IN- oder OUT-Taste, um den betreffenden Punkt auf der Zeitzähler-Anzeige anzuzeigen.
2. Halten Sie die IN- bzw. OUT-Taste gedrückt und drücken Sie gleichzeitig die TRIM + oder TRIM – Taste. Bei jedem Drücken der TRIM + Taste wird der Schnittpunkt um ein Vollbild weitergeschaltet und bei jedem Drücken der TRIM – Taste wird er um ein Vollbild zurückgeschaltet.



Eingabe eines neuen Schnittpunktes

Suchen Sie den neuen Schnittpunkt auf und drücken Sie die ENTRY-Taste zusammen mit der IN- bzw. OUT-Taste. Der neue Schnittpunkt wird dann als IN- bzw. OUT-Punkt eingegeben, wobei der vorhergehende Punkt gelöscht wird.

Zeitzähler-Anzeige



Die Zeitzähler-Anzeige zeigt die Bandlaufzeit bei Normalgeschwindigkeit an, wenn der CTL/CT-Wähler auf CTL gestellt ist. Durch Drücken der RESET-Taste kann die Anzeige auf „0:00:00:00" zurückgestellt werden. Läuft das Band dann von „0:00:00:00" aus in Rückwärtsrichtung, so wird der Anzeige ein Minuszeichen („–") vorausgestellt. In der CTL-Betriebsart werden die auf dem Band aufgezeichneten CTL-Signale gezählt. Fehlen die CTL-Signale, kann der Zeitzähler deshalb nicht die exakte Zeit anzeigen. Wenn des öfteren vor- oder zurückgespult wird, ist ebenfalls keine exakte Anzeige der Zeit möglich. Bei der Wiedergabe eines vollkommen neuen, noch unbespielten Bandes ändert sich die Zähler-Anzeige nicht, da noch keine CTL-Signale aufgezeichnet sind. Wird der CTL/TC-Wähler auf TC gestellt, so erscheint auf der Anzeige der wiedergegebene Zeitcode oder der vom eingebauten Zeitcode-Generator erzeugte Zeitcode.

Leuchtet der RECORDER-Indikator, so wird die Bandposition des Aufnahme-Geräts angezeigt und leuchtet der PLAYER-Indikator, so wird die Position des Wiedergabe-Geräts angezeigt.

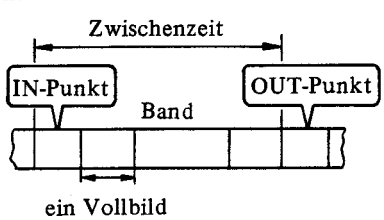
Wenn die IN- oder OUT-Taste nach Eingabe des IN- und OUT-Punktes gedrückt wird, erscheint der IN- bzw. OUT-Punkt auf der Anzeige.

Wird die RESET-Taste nach Eingabe der Schnittpunkte gedrückt, so werden die eingegebenen Punkte gelöscht. Die RESET-Taste darf deshalb erst dann gedrückt werden, wenn die Schnitt-Aufnahme vollständig ausgeführt ist.

Die RESET-Taste arbeitet nur in der CTL-Betriebsart.

Anzeige der Schnittdauer

Wenn nach Eingabe der IN- und OUT-Punkte die LAP-Taste gedrückt wird, so wird die Schnittdauer (Zeit zwischen IN- und OUT-Punkten) auf der Zeitzähler-Anzeige angezeigt, solange die Taste gedrückt gehalten wird. Leuchtet der RECORDER-Indikator, so wird die Schnittzeit des Aufnahme-Geräts angezeigt und leuchtet der PLAYER-Indikator, so wird die Schnittzeit des Wiedergabe-Geräts angezeigt. Wenn der OUT-Punkt am Wiedergabe-Gerät eingegeben wird, so wird die Schnittzeit nach Ausführung des Vorschau- oder des automatischen Schnitt-Betriebs zum Aufnahme-Gerät übertragen.



Wenn die LAP-Taste gedrückt wird, ohne daß zuvor die Schnittpunkte eingegeben wurden, so wird folgende Zeit angezeigt.

Wenn weder IN- noch OUT-Punkte eingegeben wurden, so wird die Schnittzeit des vorhergehenden Schnittes angezeigt.

Wenn nur der IN-Punkt eingegeben wurde, so wird die Zeit vom IN-Punkt bis zum momentanen Bandpunkt angezeigt.

Wenn nur der OUT-Punkt eingegeben wurde, so wird die Zeit des vorhergehenden Schnittes angezeigt.

Blinkende Lampen

Drücken Sie zum Ausführen des Schnittes die Tasten, deren Lampen blinken.

- Ein Blinken der ASSEMBLE- und INSERT- (VIDEO, AUDIO CH-1, AUDIO CH-2, TIME CODE) -Lampen zeigt an, daß die Schnitt-Betriebsart durch Drücken einer Taste gewählt werden soll.
  Sobald eine Taste gedrückt wird, zeigt sie durch konstantes Leuchten an, daß die Schnitt-Betriebsart nun gewählt ist.
- Durch Blinken der IN- und/oder OUT-Lampe(n) des Wiedergabe- und Aufnahme-Geräts wird angezeigt, daß der (die) Schnittpunkt(e) eingegeben werden muß (müssen).
  Wenn die IN- und OUT-Punkte eingegeben wurden, der Schnitt aber noch nicht ausgeführt wurde, leuchten die IN- und OUT-Lampen.
- Durch Blinken der PREVIEW- und AUTO EDIT-Lampen wird angezeigt, daß nun der Vorschau- oder automatische Schnittbetrieb ausgeführt werden kann.
  Durch konstantes Leuchten der PREVIEW- oder AUTO EDIT-Lampe wird angezeigt, daß sich das Aufnahme-Gerät in der Vorschau- bzw. automatischen Schnitt-Betriebsart befindet.

Ändern der Schnittvoreinlaufzeit

Die Schnittvoreinlaufzeit ist auf 5 Sekunden eingestellt, kann aber gegebenenfalls auf 0, 1, 2, 3, 5, 7, 10 oder 15 Sekunden geändert werden. Wenn eine solche Änderung vorgenommen wird, muß die Aufnahmeperiode des CTL-Signals vor dem IN-Punkt bzw. die Periode zwischen dem Aufnahme-Startpunkt und dem ersten IN-Punkt entsprechend der neuen Schnittvoreinlaufzeit geändert werden. Die am Aufnahme-Gerät eingestellte Schnittvoreinlaufzeit ist sowohl für das Wiedergabe- als auch für das Aufnahme-Gerät wirksam. Genaueres dazu siehe Abschnitt 2.

1-7-3. Parallel-Betrieb von Wiedergabe- und Aufnahme-Gerät

Die Suchlauf-, Eingabe-, Wiedergabe-, Vorspul- und Rückspul-Funktion kann vom Wiedergabe- oder Aufnahme-Gerät aus bedient werden, während eins dieser Geräte verwendet wird, so daß die Schnittzeit reduziert wird.

Methode 1

Stellen Sie den Fernbedienungswähler des Wiedergabe-Geräts auf LOCAL. An den Bedienungspulten wird dann das Aufnahme- bzw. Wiedergabe-Gerät selbst gesteuert.

Methode 2

Stellen Sie den Fernbedienungswähler des Wiedergabe-Geräts auf REMOTE 1 und verwenden Sie das obere Bedienungspult des Aufnahme-Geräts wie folgt.

1. Drücken Sie die RECORDER-Taste, so daß der RECORDER-Indikator leuchtet und bedienen Sie das Aufnahme-Gerät am oberen Bedienungspult.
2. Drücken Sie die PLAYER-Taste, so daß der PLAYER-Indikator leuchtet. Das Aufnahme-Gerät kann nun am Bedienungspult des Wiedergabe-Geräts bedient werden. Das Wiedergabe-Gerät kann an folgenden Bedienungselementen bedient werden, und die Zeitzähler-Anzeige zeigt die Bandposition des Wiedergabe-Geräts an.
   Suchlaufknopf, Suchlauftaste, PREROLL, PLAY, F FWD, REW, STOP, STANDBY, EJECT, ENTRY IN, ENTRY OUT, TRIM +, TRIM –, LAP, RESET.
   Das Aufnahme-Gerät bleibt weiterhin in der Betriebsart von Schritt 1.
3. Drücken Sie die RECORDER-Taste, um wieder das Aufnahme-Gerät zu bedienen.

- Wenn das Bedienungspult abgenommen und mit dem als Sonderzubehör lieferbaren Fernbedienungskabel BK-802 angeschlossen wird, können Aufnahme- und Wiedergabe-Gerät fernbedient werden.

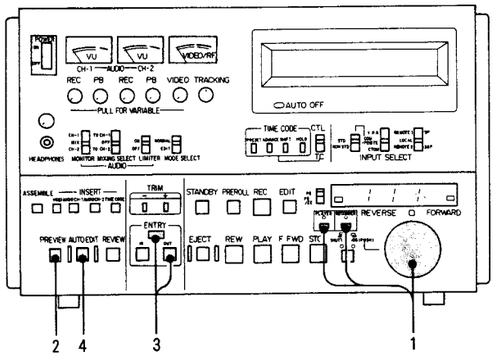
1-7-4. Schnelles Schneiden

Für schnelleres Schneiden können die IN- und OUT-Punkte im Vorschau-Betrieb eingegeben werden.

1. Suchen Sie die gewünschten IN-Punkte des Wiedergabe- und Aufnahme-Geräts mit dem Suchlaufknopf auf und stoppen Sie dann das Band.
2. Drücken Sie die PREVIEW-Taste. Die in Schritt 1 aufgesuchten Punkte werden als IN-Punkte für Aufnahme- und Wiedergabe-Gerät eingegeben (IN-Taste leuchtet) und der Vorschau-Betrieb beginnt.
3. Beobachten Sie den Monitor des Aufnahme-Geräts und drücken Sie an dem Punkt, an dem die Szene enden soll, gleichzeitig die OUT- und ENTRY-Taste am Wiedergabe- oder Aufnahme-Gerät. Dieser Punkt wird nun als OUT-Punkt abgespeichert. Das Band läuft noch zwei Sekunden weiter (Schnittnachlauf) und kehrt dann zum Schnittvoreinlaufpunkt zurück.

- Der Suchlaufknopf kann auch zum exakten Aufsuchen des OUT- Punktes verwendet werden.
- Falls notwendig führen Sie den Vorschau-Betrieb erneut durch und korrigieren Sie die IN- und/oder OUT-Punkte.

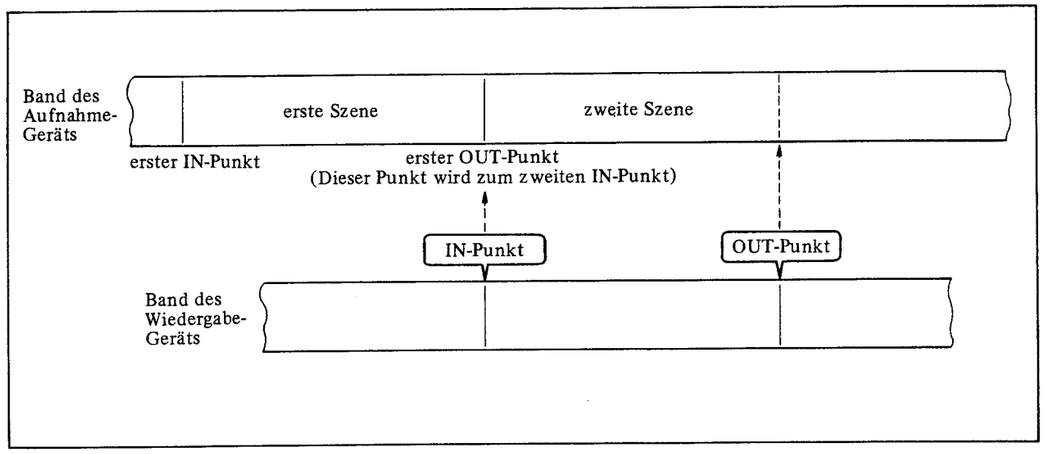
4. Drücken Sie die AUTO EDIT-Taste. Die Schnitt-Aufnahme wird dann ausgeführt.



Noch schnelleres Schneiden.
Drücken Sie die AUTO EDIT-Taste im Schritt 2 des obigen Vorgangs. Die Schnitt-Aufnahme beginnt dann. Der in Schritt 1 aufgesuchte Punkt wird zum IN-Punkt und der Punkt, an dem die OUT- und ENTRY-Tasten gedrückt werden, wird zum OUT- Punkt.

1-7-5. Fortlaufendes Schneiden (Butt-Betrieb)

Ist die Aufnahme vom IN- zum OUT-Punkt beendet, kehrt das Aufnahme-Gerät zum OUT-Punkt zurück und stoppt dort. Der OUT-Punkt kann automatisch zum nächsten IN-Punkt des Aufnahme-Geräts gemacht werden, und der folgende Schnitt kann durch einfaches Eingeben der IN- und OUT-Punkte am Wiedergabe-Gerät und durch Drücken der AUTO EDIT-Taste ausgeführt werden. Eine Eingabe des OUT-Punktes für das Aufnahme-Gerät ist nicht erforderlich. Drücken Sie in diesem Fall zum Beenden des Schneidens gleichzeitig die ENTRY- und OUT-Tasten. Diese Technik wird auch „Butt-Betrieb" genannt.



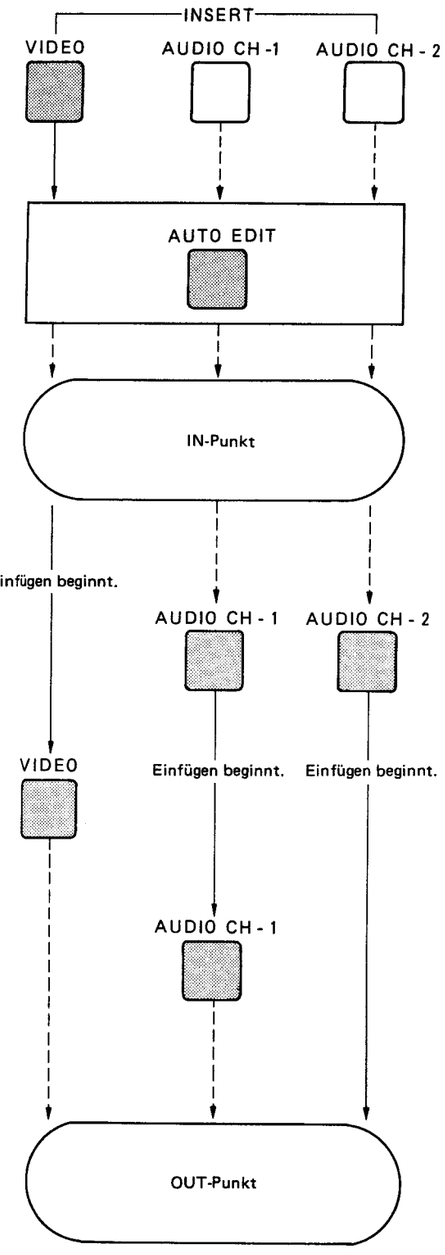
1-7-6. Separater Tonschnitt

Bei Einfüg-Betrieb kann die Schnitt-Aufnahme für das Video-, Tonkanal-1- und Tonkanal-2-Signal unabhängig gestartet und gestoppt werden.

1. Wählen Sie das gewünschte Eingangssignal durch Drücken einer INSERT-Taste.
2. Drücken Sie die AUTO EDIT-Taste zum Starten der automatischen Schnitt-Aufnahme.
3. An dem Punkt, an dem die Schnitt-Aufnahme des Video- oder Tonsignals enden soll, drücken Sie die entsprechende(n) INSERT-Taste(n), so daß diese leuchtet (leuchten).
   Das gewünschte Signal kann durch Drücken der betreffenden INSERT-Taste(n) an jedem beliebigen Punkt ein- oder ausgeschaltet werden. Selbst wenn alle Signal ausgeschaltet sind, kann das gewünschte Signal durch einfaches Drücken der INSERT-Taste eingefügt werden.
4. Wurde ein OUT-Punkt eingegeben, so stoppt die Aufnahme automatisch. Wurde kein OUT-Punkt eingegeben, so drücken Sie zum Stoppen der Schnitt-Aufnahme die ENTRY- und OUT- Tasten.

Beim manuellen Einfüg-Betrieb kann der separate Tonschnitt auf gleiche Weise durchgeführt werden. Zum Stoppen der Schnitt-Aufnahme drücken Sie die PLAY-Taste.

Beispiel zum separaten Tonschnitt





Zu drückende Taste

Das Videosignal wird als Eingangssignal gewählt.

Schnitt-Aufnahme des Videosignals beginnt.

Schnitt-Aufnahme von Tonkanal-1- und Kanal-2-Signal beginnt.

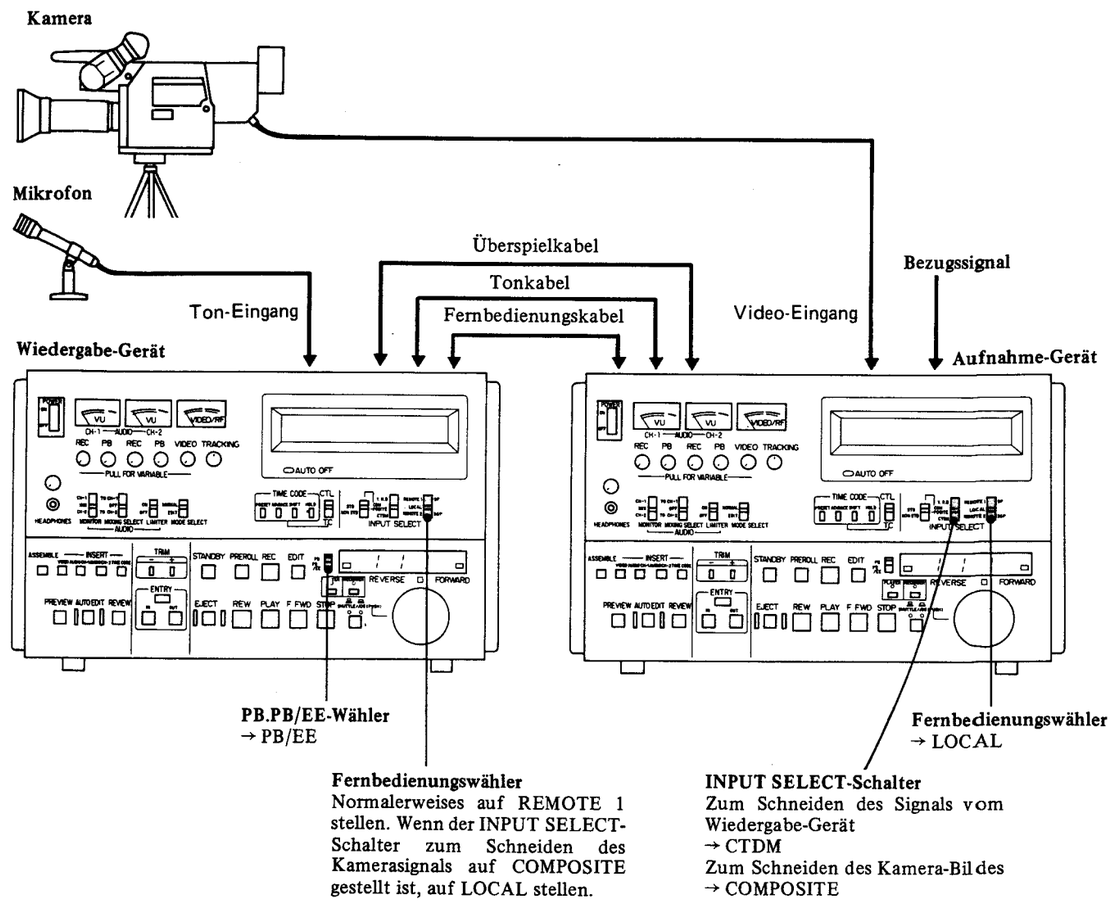
Aufnahme des Videosignals endet.

Aufnahme des Tonkanals-1-Signals endet.

Schnitt-Aufnahme endet.

1-7-7. Schneiden des Kamera-Bildes

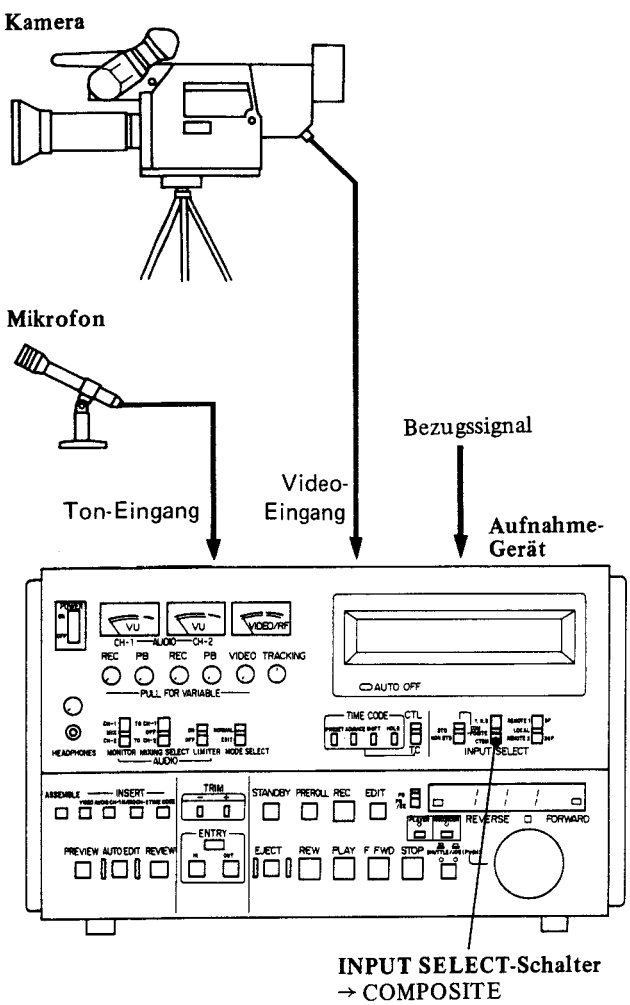
Schneiden des Kamera-Bildes während des Band-zu-Band-Schnittbetriebs



Fernbedienungswähler
Normalerweises auf REMOTE 1 stellen. Wenn der INPUT SELECT-Schalter zum Schneiden des Kamerasignals auf COMPOSITE gestellt ist, auf LOCAL stellen.

INPUT SELECT-Schalter
Zum Schneiden des Signals vom Wiedergabe-Gerät
→ CTDM
Zum Schneiden des Kamera-Bildes
→ COMPOSITE

Um nur das Kamera-Bild zu schneiden



Betrieb

Schalten Sie das Wiedergabe-Gerät in die Stopp-Funktion.

Für Anfügschnitt-Betrieb

Geben Sie den IN-Punkt des Aufnahme-Geräts ein und drücken Sie die AUTO EDIT-Taste. Zum Stoppen des Schneidens drücken Sie die ENTRY- und OUT-Tasten gleichzeitig.

Für Einfügschnitt-Betrieb

Geben Sie die IN- und OUT-Punkte des Aufnahme-Geräts ein und drücken Sie Die AUTO EDIT-Taste. Wenn der OUT-Punkt nicht eingegeben wurde, drücken Sie die ENTRY- und OUT-Tasten gleichzeitig, um den Schnittvorgang zu stoppen.

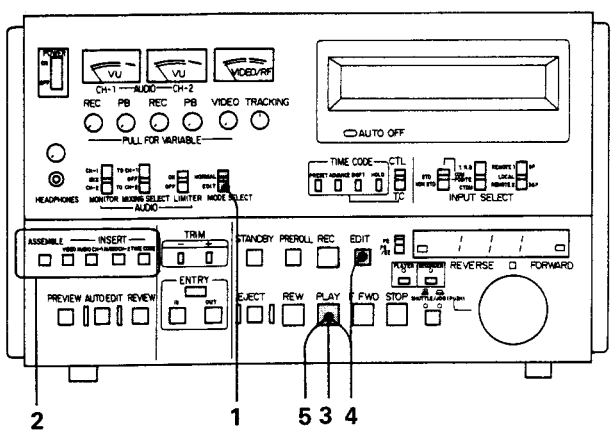
Hinweis zum Bezugssignal

Das am REF. VIDEO IN-Anschluß angeschlossene Bezugssignal muß mit dem an die Kamera angeschlossenen Genlock-Signal synchronisiert sein. Wenn kein synchronisiertes Bezugssignal zum BVW-40P geleitet werden kann, schalten Sie VIDEO INPUT-Anschluß und REF. VIDEO IN-Anschluß in einer Brückenschaltung zusammen, so daß das Signal der Kamera zum REF. VIDEO IN-Anschluß gelangt.

1-7-8. Manuelles Schneiden

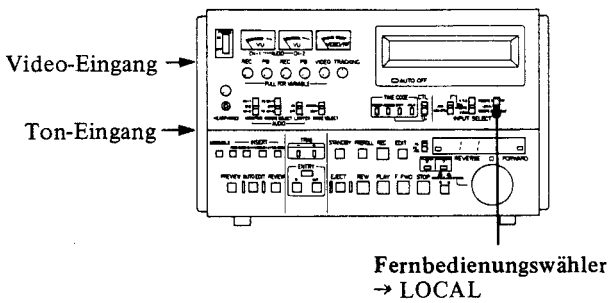
Die Anschlüsse sind gleich wie beim automatischen Schneiden.

1. Stellen Sie den MODE SELECT-Schalter auf EDIT.
2. Wählen Sie die Schnitt-Betriebsart: Anfügen oder Einfügen.
3. Geben Sie die Bänder des Aufnahme- und Wiedergabe-Geräts wieder.
4. An dem Punkt, an dem die Szene beginnen soll, drücken Sie am Aufnahme-Gerät gleichzeitig die PLAY- und EDIT-Taste. Die Schnitt-Aufnahme beginnt dann an dem Punkt, an dem die Tasten gedrückt wurden.
5. An dem Punkt, an dem die Szene enden soll, drücken Sie die PLAY-Taste am Aufnahme-Gerät. Die Schnitt-Aufnahme endet dann und das Aufnahme-Gerät schaltet auf Wiedergabe.



- Wenn das Schneiden aus der Stopp-Funktion heraus gestartet wird oder durch die STOP-Taste gestoppt wird, ist das Bild am IN- oder OUT-Punkt instabil.
- Um ein vollkommen stabiles Wiedergabebild zu erhalten, starten Sie die Wiedergabe mindestens zwei Sekunden vor dem IN-Punkt.

1-7-9. Schneiden mit einem BVW-40P



Wenn ein Video- und Tonsignal angeschlossen ist, kann mit diesem Gerät wie auf den vorhergehenden Seiten beschrieben geschnitten werden.

Hinweise

- Stellen Sie den Fernbedienungswähler auf LOCAL.
- Die Eingabe der IN- und OUT-Punkte sowie die Bedienung der AUTO EDIT-, PREVIEW- und TRIM-Taste erfolgt am BVW-40P. Die Bedienungsvorgänge für die Video- und Ton-Eingangssignale erfolgt an den anderen Geräten.

1-8 HINWEISE ZUR VERWENDUNG EINER SCHNITT-STEUEREINHEIT

Wenn der BVW-40P von einer Schnitt-Steuereinheit aus bedient wird, stellen Sie diese so ein, daß der Steuerbefehl für Schnittanfang (CUT-IN) und der Befehl für Schnittende (CUT-OUT) drei Sekunden vor dem Schnittpunkt abgegeben wird.

- An Geräten der Serie BVE-500/500A ist diese Einstellung nicht möglich.

1-9. TONKOPF-REINIGUNG

Reinigen Sie die Video- und Tonköpfe mit der Videokopf-Reinigungscassette HG-5CL (Sonderzubehör). Genauere Informationen dazu finden Sie in der Anleitung der Reinigungscassette.

- Da die Kopftrommel auch in der Stopp-Funktion rotiert, vergessen Sie nicht, die Reinigungscassette nach der Verwendung herauszunehmen.

1-10 TECHNISCHE DATEN

Mechanische Daten

Gewicht 38,7 kg

Abmessungen 454 x 264 x 550 mm (B/H/T)

Betriebsposition
horizontal (innerhalb 30°)

Bandtransportmechanismums
Betacam-System

Videocassette HG-20 Cassette (1/2-Zoll Cassette für Beta-Format) oder entsprechende Cassette

Bandgeschwindigkeit
101,5 mm/s

Aufnahme-/Wiedergabezeit
20 Minuten max. mit HG-20 Cassette

Gleichlaufschwankungen
weniger als 0,2% (DIN)

Vorspul-/Rückspulzeit
weniger als 90 Sekunden mit HG-20 Cassette

Suchlaufgeschwindigkeit
Shuttle: Standbild, 1/30, 1/10, 1/5, 1/2, 1, 2, 5 und 10 fache Normalgeschwindigkeit in Vorwärts- und Rückwärtsrichtung
Jog: Standbild bis einfache Normalgeschwindigkeit in Vorwärts- und Rückwärtsrichtung

Anschlüsse
AC IN: dreiadrig (mit Masse)
VIDEO INPUT: BNC-Anschlüsse
VIDEO OUTPUT 1/2: BNC-Anschlüsse
AUDIO INPUT CH-1/CH-2: XLR-Anschlüsse
AUDIO OUTPUT CH-1/CH-2/MONITOR: XLR-Stiftanschlüsse
DUB/COMPONENT INPUT: 12pol Stiftanschluß
DUB/COMPONENT OUTPUT: 12pol Anschluß
DUB (U-matic) OUTPUT: 7pol Anschluß
REMOTE 1 (9P): 9pol Anschluß
REMOTE 2 (36P): 36pol Anschluß
MONITOR: 8pol Anschluß
TBC REMOTE: 15pol Stiftanschluß
REF. VIDEO INPUT: BNC-Anschluß
REF. VIDEO OUTPUT: BNC-Anschluß
TIME CODE IN: XLR-Anschluß
TIME CODE OUT XLR-Stiftanschluß
HEADPHONES: JM-60 Stereo-Klinkenbuchse

Betriebstemperatur
5°C bis 40°C

Lagertemperatur
−20°C bis +60°C

Elektrische Daten

Stromversorgung
90 V bis 265 V Wechselspannung, 48 bis 64 Hz

Leistungsaufnahme
280W

Video

Video-Aufnahmesystem
Luminanz: FM
Chrominanz: Komprimiertes Zeitteilungsmultiplex-FM-Signal

Bandbreite Luminanz: 25Hz−4,0MHz $^{+0,5dB}_{-6,0dB}$
Chrominanz: R−Y 25Hz−1,5MHz $^{+0,5dB}_{-3,0dB}$
B−Y 25Hz−1,5MHz $^{+0,5dB}_{-3,0dB}$

Signal-Rauschabstand
Luminanz: besser als 46dB
AM: besser als 49dB
PM: besser als 49dB

K-Faktor (2T-Impuls)
weniger als 3%

DG weniger als 3%

DP weniger als 3°

Y/C-Verzögerung
weniger als 20 ns

Eingang
REF. VIDEO INPUT
1,0 Vss ±0,3 V, 75 Ohm EIN/AUS
VIDEO INPUT
FBAS, 1,0 Vss, 75 Ohm EIN/AUS
DUB/COMPONENT INPUT
Luminanz: 1,0 Vss, 75 Ohm, Video positiv
Chrominanz: R−Y 0,7 Vss, 75 Ohm
B−Y 0,7 Vss, 75 Ohm
AUDIO INPUT CH-1/CH-2
LOW: −60dB, 3k Ohm, symmetrisch
HIGH: +4dB, 600 Ohm/10kOhm, symmetrisch
TIME CODE INPUT
0,5 − 18 Vss, 600 Ohm, symmetrisch

Ausgang
VIDEO OUTPUT 1
FBAS, 1,0 Vss, 75 Ohm, Video positiv
VIDEO OUTPUT 2
FBAS, 1,0 Vss, 75 Ohm, Video positiv
FBA, 0,7 Vss, 75 Ohm
DUB OUT (U-matic)
Luminanz: 0,5 Vss (75 Ohm Last), Video positiv
Chrominanz: 0,5 Vss (75 Ohm Last, heruntergesetzter Farbträger)

DUB/COMPONENT OUTPUT
Luminanz: 1,0 Vss, 75 Ohm, Video positiv
Chrominanz: R–Y 0,7 Vss, 75 Ohm
B–Y 0,7 Vss, 75 Ohm

Schnitt-Funktionen
Einfügen (Video, Audio CH-1, Audio CH-2, Zeitcode), Einfügen, automatisches Schneiden, manuelles Schneiden, Vorschau, Rückschau, Schnittpunktkorrektur, Schnittvoreinlauf

Audio

Frequenzgang 50Hz–15kHz ±3,0dB
Signal-Rauschabstand
besser als 50dB (bei 3% Verzerrung ohne Rauschverminderungssystem)
Verzerrung weniger als 2% (1 kHz Bezugspegel)
Eingang AUDIO INPUT CH-1/CH-2
LOW: –60dB, 3kOhm, symmetrisch
HIGH: +4dB, 10kOhm, symmetrisch
Ausgang AUDIO OUTPUT CH-1/CH-2/MONITOR
+4dB, niedrige Impedanz, symmetrisch (600 Ohm Last)
Zeitcode +4dBm (600 Ohm), symmetrisch

Prozessor-Einstellbereich

Videopegel ±3dB
Chromapegel ±3dB
Schwarzpegel 0 bis +15 IRE
System-FT-Phase
360°ss
System-Synchronphase
$^{+3}_{-1}$ µsec
Y/C-Verzögerung
±50 ns

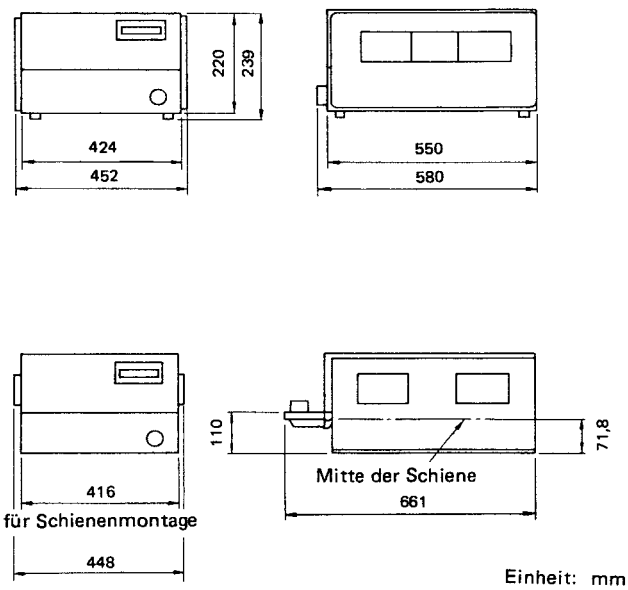
Mitgeliefertes Zubehör

Netzkabel (1)
9pol Fernbedienungskabel RCC-5G (1)
12pol Überspielkabel (1)
Verlängerungsplatte A (1)
Verlängerungsplatte B (1)
Verlängerungsplatte C (1)
Bedienungs- und Wartungsanleitung (1)

Sonderzubehör

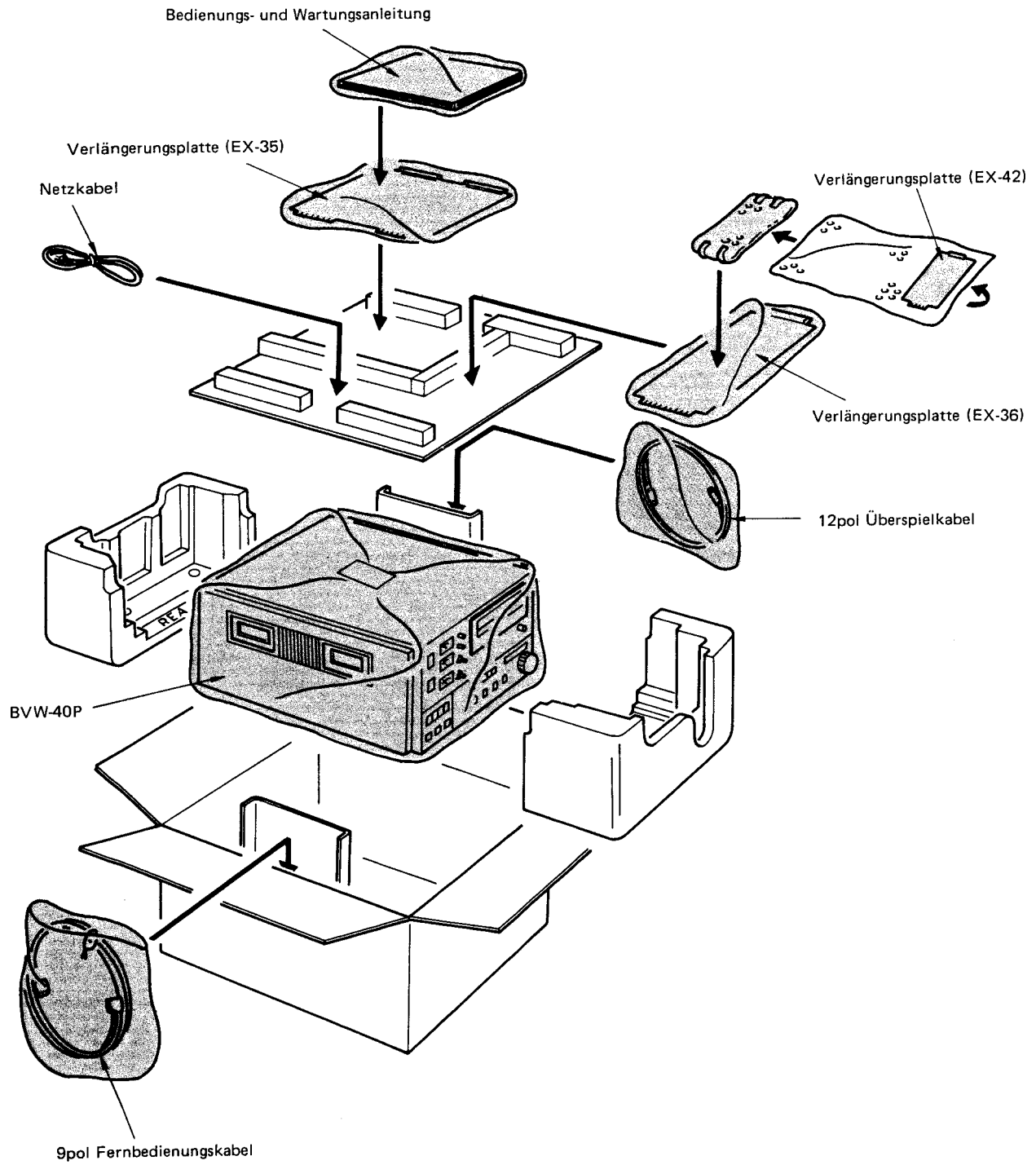
Gestell-Montagesatz BK-805
Reinigungscassette HG-5CL

Abmessungen



Einheit: mm

1-11 WIEDERVERPACKUNG



SECTION 2
INSTALLATION

Be sure to install the BVW-40P at the installation space under the required operational environment as regulated below. It will assure the BVW-40P's superior performance while maintaining the excellent serviceability and accessibility.

2-1. OPERATIONAL ENVIRONMENT

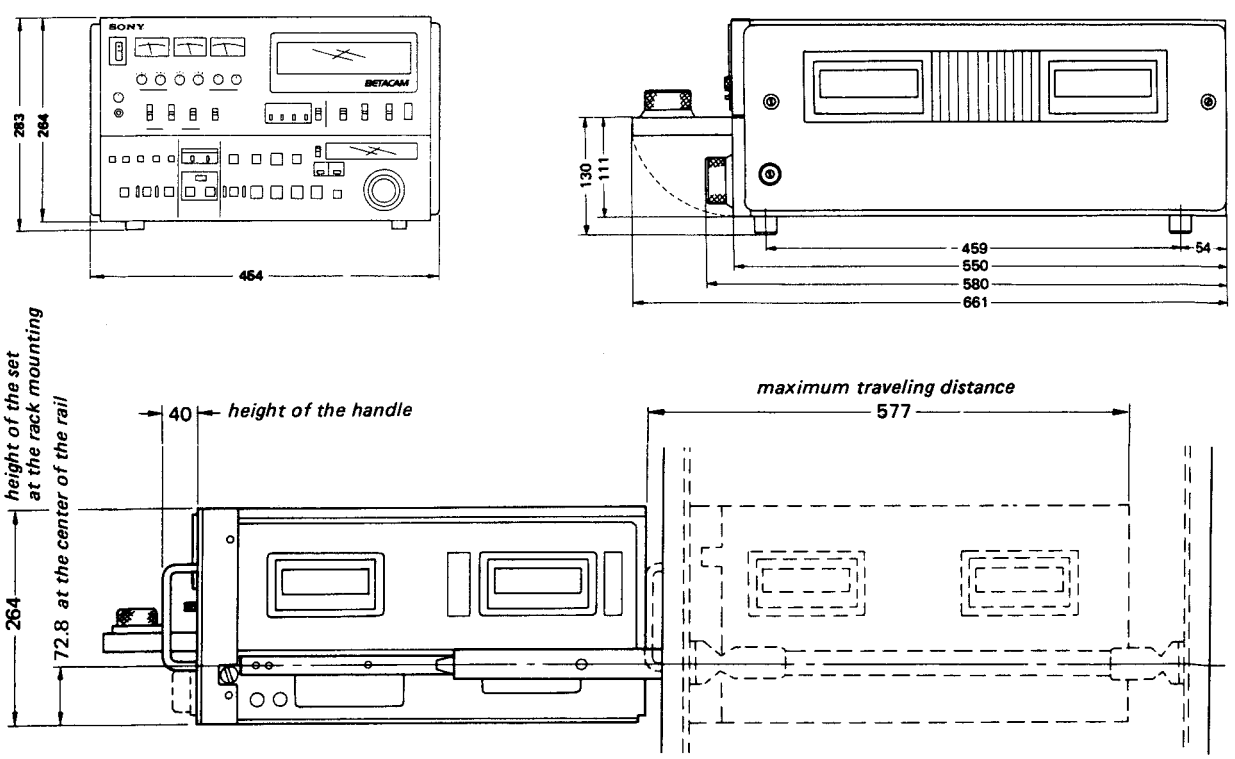
1. The operating temperature range:
   +5°C to 40°C
   (Good air circulation is essential to prevent internal heat build-up. Place the set in locations with sufficient air circulation. Do not block the ventilation holes on the cabinet and the rear panel.)

2. The storage temperature range:
   -20°C to +60°C

3. Avoidance installation areas:
   . Areas where the BVW-40P will be exposed to direct sunlight, or any other strong direct lights.
   . Dusty areas or areas where it is subject to vibration.
   . Areas where high electric or magnetic fields are to be found.
   . Areas near heat sources.

2-2. INSTALLATION SPACE

1. The outer dimensions of the set are shown in the figure below. The rear side of the set must be at least 40cm away from the wall for ventilation and maintenance.
2. When the set is operated on the desk or similar condition, assure that the vertical clearance above the BVW-40P is at least 40cm to provide the accessability to the printed circuit boards and other mechanical parts. But note that it is not necessary to provide the space when the set is mounted in a rack since the printed circuit boards can be repaired after the set is pulled out.



Unit: mm

2-3. OPERATING VOLTAGE

100V ± 10% to 240V ± 10%
48Hz to 64Hz
The power consumption : 280W

2-4. CONNECTORS FOR OPTIONAL CONNECTION

When external cables are connected to the various connectors on the BVW-40P connector panel during the installation or the maintenance, hardwares as stated below or the equivalents must be used.

panel Indication	Connection Connector
REF. VDIEO IN REF. VIDEO OUT VIDEO IN VIDEO OUT 1/2	1-560-069-11 PLUG, BNC, MALE
DUB OUT (U-matic)	1-508-948-00 PLUG, 7P, MALE
DUB/COMP IN	1-562-159-00 PLUG, 12P, FEMALE
DUB/COMP OUT	1-560-995-00 PLUG, 12P, MALE
AUDIO IN TIME CODE IN	1-508-084-00 CONNECTOR, 3P, FEMALE
AUDIO OUT MONITOR OUT TIME CODE OUT	1-508-083-00 CONNECTOR, 3P, MALE
MONITOR	1-506-161-00 CONNECTOR, 8P, MALE
TBC REMOTE	1-561-610-21 RECEPTACLE, 15P, FEMALE 1-561-929-00 JUNCTION SHELL
REMOTE-1 (9P)	1-561-749-00 JUNCTION SHELL, 9P 1-561-651-00 CONNECTOR, 9P, (M)
REMOTE-2 (36P)	1-508-852-00 CONNECTOR, 36P, MALE

2-5. INPUT/OUTPUT SIGNAL OF THE CONNECTOR

INPUT

REF.VIDEO IN : 1.0Vp-p ± 0.3V, 75ohms ON/OFF

VIDEO IN : composite, 1.0Vp-p, 75ohms, ON/OFF

DUB/COMP IN : luminance signal;
1.0Vp-p, 75ohms, sync negative
chrominance signal;
R-Y, 0.7Vp-p, 75ohms
B-Y, 0.7Vp-p, 75ohms

AUDIO IN CH-1/CH-2
: LOW; -60dB, 3kohms, balanced
HIGH; +4dB, 600ohms/10kohms, balanced

TIME CODE IN : 0.5 to 18Vp-p, 3kohms, unbalanced

OUTPUT

VIDEO OUT 1 : composite, 1.0Vp-p, sync negative, 75ohms

VIDEO OUT 2 : composite, 1.0Vp-p, sync negative, 75ohms
non-composite, 0.7Vp-p, 75ohms

DUB OUT (U-matic)
: luminance signal;
0.5Vp-p, sync negative (75ohm load permissible)
chrominance signal;
0.5Vp-p, (75ohm load permissible, SC low range conversion)

DUB/COMP OUT
: luminance signal;
1.0Vp-p,75ohms sync negative
chrominance signal;
R-Y, 0.7Vp-p,75ohms
B-Y, 0.7Vp-p,75ohms

AUDIO OUT, AUDIO MONITOR OUT
: +4dB, low impedance, balanced (600ohm load permissible)

TIME CODE OUT
: 2.2Vp-p ± 3dB (600ohm),
1.2Vp-p ± 3dB (75ohm),unbalanced

REMOTE-1 (9P)

Pin No.	Description	I/O
1	Frame Ground	—
2	Transmit A	O
3	Receive B	I
4	Receive Common	—
5	Spare	—
6	Transmit Common	—
7	Transmit B	O
8	Receive A	I
9	Frame Ground	—

REMOTE-2 (36P)

Pin No.	Description	LEVEL
1	UNREG 5V	TTL
2	L-FF COMMAND IN	TTL
3	L-FWD COMMAND IN	TTL
4	L-REW COMMAND IN	TTL
5	L-EJECT COMMAND IN	TTL
6	L-STOP COMMAND IN	TTL
7	L-PAUSE COMMAND IN	TTL
8	L-REC COMMAND IN	TTL
9	L-CUT IN COMMAND IN	TTL
10	L-EDIT COMMAND IN	TTL
11	L-CUT OUT COMMAND IN	TTL
12	L-FF STATUS OUT	TTL
13	L-FWD STATUS OUT	TTL
14	L-REW STATUS OUT	TTL
15	L-STNDBY STATUS OUT	TTL
16	L-STOP STATUS OUT	TTL
17	L-PAUSE STATUS 1 IN/OUT	TTL
18	L-REC STATUS OUT	TTL
19	L-INSERT STATUS OUT	TTL
20	L-VIDEO INSERT IN	TTL

Pin No.	Description	LEVEL
21	L-AUDIO-1 INSERT IN	TTL
22	L-AUDIO-2 INSERT IN	TTL
23	L-REVERSE COMMAND IN	TTL
24	SPEED A IN	TTL
25	SPEED B IN	TTL
26	L-CTL PULSE OUT	TTL
27	L-TACH OUT	TTL
28	L-CAPSTAN LOCK OUT	TTL
29	SYNCRONIZE IN	3.0V;0% -0.3V; -10 to -15% +6V;+10 to +15%
30	NC	—
31	H-NORMAL FWD IN	TTL
32	L-PAUSE STATUS 2 OUT	TTL
33	L-SEARCH STATUS IN	TTL
34	NC	—
35	GND	—
36	GND	—

2-6. SELECT SWITCH SETTING

Along with select switches on the control panel and the connector panel, the switches listed below are on the circuit boards. The switches must be used according to systems and conditions.

BC-5 BOARD

S1 to S4. These switches are used for adjustment

S5. EIA/CCIR select switch
ON: CCIR
OFF: EIA
When the set is shipped, the EIA/CCIR select switch is set to the ON position.

EN-21P BOARD

S1. COMB FILTER ON/OFF switch
ON: COMB FILTER is not activated
OFF: COMB FILTER is activated
When the set is shipped, the COMB FILTER ON/OFF switch is set to the OFF position.

S401. COLOR/B/W select switch
ON: B/W mode
OFF: color mode
When the set is shipped, the COLOR/B/W select switch is set to the OFF position.

S501. COMP/NON COMP select switch
ON: The non composite video signal is fed out from VIDEO OUT-2 connector.
OFF: The composite video signal is fed out from VIDEO OUT-2 connector.
When the set is shipped, the COMP/NON COMP select switch is set to the OFF position.

S502. Y-MUTE switch
ON: The composite sync and chrominance sync signals without luminance signal are fed out from all the VIDEO OUT connectors.
OFF: The noumal video signal is fed out.
When the set is shipped, the Y-MUTE switch is set to the OFF position.

S801. COLOR FRAMING ON/OFF switch
ON: COLOR FRAMING is not activated.
OFF: COLOR FRAMING is activated.
When the set is shipped, the COLOR FRAMING ON/OFF switch is set to the OFF position.

CK-17 BOARD

S1. VIDEO OUT SYNC control switch
ON: The sync of the video signal always same phase as the reference signal.
OFF: The sync of the video signal is 8H delayed from the reference signal in EE mode.
When the set is shipped, the VIDEO OUT SYNC control switch is set to the OFF position.

SY-4 BOARD

S1. This switch is used for the check at factory. When the set is shipped, this switch in set to the OFF position.

S2. NTSC/CCIR select switch
ON: CCIR
OFF: NTSC
When the set is shipped, the NTSC/CCIR select switch is set to the ON position.

S3-1.
S3-2.) LOCAL FUNCTION select switch

When REMOTE/LOCAL select switch on the front panel is into REMOTE, select the mode can be operated at the LOCAL (VTR) side.

S3-1	S3-2	Operating mode
OFF	OFF	ALL MUTE
ON	OFF	STOP, EJECT
OFF	ON	STOP, EJECT, F.FWD, REW, PLAY, SEARCH, STAND-BY, PREROLL, CTL RESET
ON	ON	STOP, EJECT, F.FWD, REW, SEARCH, STAND-BY, PREROLL, CTL RESET, REC

When the set is shipped, S3-1 is set to the ON position and the S3-2 is set to the OFF position.

S3-3. STAND-BY ON/OFF OPERATION select switch
The switch select the STAND-BY ON/OFF operational method by using the remote controller connected to REMOTE-2 connector.

ON When the VTR is in the STAND-BY OFF mode, the VTR is into the STAND-BY ON mode according to press the STOP button.
The selection of STAND-BY ON/OFF is performed by pressing the PAUSE button.

OFF: The selection of STAND-BY ON/OFF is performed by pressing the STOP button and the PAUSE button simultaneously.

When the set is shipped, the STAND-BY ON/OFF OPERATION select switch is set to the OFF position.

S3-4 to S3-7. These switches are used for the check at factory.

When the set is shipped, these switches are set to the OFF position.

S4-1. E-E PICTURE select switch using the PB.PB/EE SW

OFF: When the PB.PB/EE switch on the front panel is set to PB/EE mode, the E-E picture is fed out in F.FWD, REW, STOP, EJECT, STAND-BY mode.

ON: When the PB.PB/EE switch is set to PB/EE mode, the E-E picture is fed out in STOP or EJECT mode.

When the set is shipped, the E-E PICTURE select switch set to the OFF position.

S4-2. This switch do not have a function.

S4-3. CTL COUNTER 24H/± 12H indication select switch

OFF: +/- indication

ON: 24H indication

When the set is shipped, the CTL COUNTER 24H/ ± 12H select switch is set to the OFF position.

S4-4. DRUM MOTOR ON/OFF switch in the STAND-BY OFF mode

OFF: DRUM MOTOR OFF

ON: DRUM MOTOR ON

When the set is shipped, the DRUM MOTOR ON/OFF switch is set the the OFF position.

S4-5. TAPE PROTECTION MODE select switch in SEARCH LONG PAUSE

OFF: SEARCH x 1/30 times normal speed mode in the tape protection mode.

ON: STAND-BY ON mode in the tape protection mode.

When the set is shipped, the TAPE PROTECTION MODE select switch is set to the OFF position.

S4-6. AUDIO IN DELAY ON/OFF switch

OFF: Video and audio signals that are selected at IN/OUT point are recorded in the same timing.
In this mode, the controller connected to REMOTE -1/-2 connector has to fed out the CUT IN command at three frames ahead against the cut in point, and fed out the CUT OUT command at three frames ahead against CUT OUT point.

ON: Audio signal is recorded to delay at one frame against video signal.
In this mode, the controller has to fed out the command at two frames ahead.

When the set is shipped, the AUDIO IN DELAY ON/OFF switch is set to the OFF position.

S4-7. SYNCHRONIZE GRADE select switch

OFF: When the S4-8 SYNCHRONIZE ON/OFF switch is in the ON position, the VTR is set into the synchronize mode so that the editing accuracy is ± 0 frame.

ON: When S4-8, SYNCHRONIZE ON/OFF switch is in the ON position, the VTR is set into the synchronize mode so that the editing accuracy is ± 1 frames.

When the set is shipped, the SYNCHRONIZE GRADE select switch is set to the ON position.

S4-8. SYNCHRONIZE ON/OFF switch

OFF: SYNCHRONIZE OFF

ON: SYNCHRONIZE ON

When the set is shipped, the SYNCRONIZE ON/OFF switch is set to the OFF position.

S5-1 to S5-3. PREROLL TIME select switch

These switches have function only when the REMOTE/LOCAL select switch on the front panel is in the LOCAL position.

S5-1	S5-2	S5-3	Preroll time
OFF	OFF	OFF	0 second
ON	OFF	OFF	1 second
OFF	ON	OFF	2 seconds
ON	ON	OFF	3 seconds
OFF	OFF	ON	5 seconds
ON	OFF	ON	7 seconds
OFF	ON	ON	10 seconds
ON	ON	ON	15 seconds

When the set is shipped, the PREROLL TIME select switch is set to 5 seconds.

(caution) It is recommended that the PREROLL TIME select switch is set to 3 seconds or more, because of the editing accuracy.

S5-4. SEARCH KEY/DIAL DIRECT switch

OFF: The set is turned into the SEARCH mode by turning the SEARCH DIAL directly from any mode (except from the REC/EDIT mode).

ON: The set is turned into the SEARCH mode by pressing the SEARCH button.

When the set is shipped, the SEARCH KEY/DIAL DIRECT switch in set to the OFF position.

S5-5. This switch is used for the check at factory.

When the set is shipped, this switch is set to the OFF position.

S5-6. ROM VERSION indication switch

ON: The version of the ROM installed into the set is displayed at the tape counter display on the front panel.

When the set is shipped, the ROM VERSION indication switch is set to the OFF position.

S5-7. This switch is used for the check at factory. When the set is shipped, this switch is set to the OFF position.

S5-8. This switch is used for the check at factory. When the set is shipped, this switch is set to the OFF position.

S6. START TIMING select switch

OFF: After the PLAY command is fed out, the set starts after passing the delay time adjusted by RV1. When the set is shipped, the delay time is adjusted in 185msec by RV1.

ON: The set starts immediately unrelated with the delay time by RV1.

When the set is shipped, the START select switch is set to the OFF position.

S7. LONG PAUSE TIME selct switch

The set is turned into the LONG PAUSE mode automatically, after passing the selected time by this switch in the PAUSE mode.

0 : 0.5 second	1 : 1 second	2 : 2 seconds
3 : 5 seconds	4 : 10 seconds	5 : 20 seconds
6 : 30 seconds	7 : 45 seconds	8 : 1 minute
9 : 2 minutes	A : 3 minutes	B : 4 minutes
C : 5 minutes	D : 6 minutes	E : 7 minutes
F : 8 minutes		

When the set is shipped, the LONG PAUSE TIME select switch is set to the F.

TC-28P BOARD

S1. EXT/INT select switch

EXT: For using the external (optional) time code generator.

INT: For using the internal (built-in) time code generator.

When the set is shipped, the EXT/INT select switch is set to the INT position.

S2. REC RUN/FREE RUN select switch

This switch has a function only when S1 is in the INT position.

REC RUN : REC RUN mode

FREE RUN : FREE RUN mode

When the set is shipped, the REC RUN/FREE RUN select switch is set to the FREE RUN position.

S3. REGEN/PRESET select switch

PRESET : When S1 is in the INT. position, the PRESET, ADVANCE and SHIFT buttons of the front panel are activated.
When S1 is in the EXT. position, the time code of the set is pre-setted by the external time code generator.

REGEN : When S1 is in the INT. position, the time code of the set is locked to the time code signal recorded on tape.
When S1 is in the EXT. position, the time code of the set is locked to the external time code generator.

When the set is shipped, the REGEN/PRESET select switch is set to the PRESET position.

S4-1. 50Hz/60Hz select switch

ON: 50Hz

OFF: 60Hz

When the set is shipped, the 50Hz/60Hz select switch is set to the ON position.

S4-2. TIME CODE NON DROP FRAME/DROP FRAME select switch

ON: NON DROP FRAME

OFF: DROP FRAME

When the set is shipped, the TIME CODE NON DROP FRAME/DROP FRAME select switch is set to the ON position.

S4-3. This switch do not have a function.

S4-4. TIME CODE GENERATOR COLOR FRAME/ NON-COLOR FRAME select switch

This switch just have a function against the built-in time code generator.

ON: COLOR FRAME

OFF: NON-COLOR FRAME

When the set is shipped, the TIME CODE GENERATOR COLOR FRAME/NON-COLOR FRAME select switch is set to the ON position.

S5-1. This switch is used for the check at factory When the set is shipped, this switch is set to the ON position.

S5-2. This switch is used for the check at factory When the set is shipped, this switch is set to the OFF position.

S5-3. PHASE CORRECTION BIT ON/OFF switch

ON: PHASE CORRECTION BIT is activated.

OFF: PHASE CORRECTION BIT is not activated.

When the set is shipped, the PARITY BIT ON/OFF switch is set to the OFF position.

(caution) When connect the BVU-800/-820 as a recorder and BETACAM system VTR as a player, this switch is turned to OFF position certainly.

BF-7 BOARD

RV201 (Panel indication : CH-1 REC)

RV301 (Panel indication : CH-2 REC)

Change of the REC PRESET LEVEL

Keep the REC level control to the pushed-in position. The audio signal will be recorded at the preset level (0VU at +4dB input).

The preset level can be varied by these variable resistor for CH-1 and/or CH-2 respectively.

(variable range of preset level: no signal to +6dB)

RV202 (Panel indication : CH-1 PB)
RV302 (Panel indication : CH-2 PB)

Change of the PB PRESET LEVEL

Keep the PB level control to the pushed-in position, when the standard signal is playbacked, the signal level of +4dBm is obtained at the AUDIO OUTPUT connector.

The preset level can be varied by these variable resistor for CH-1 and/or CH-2 respectively.

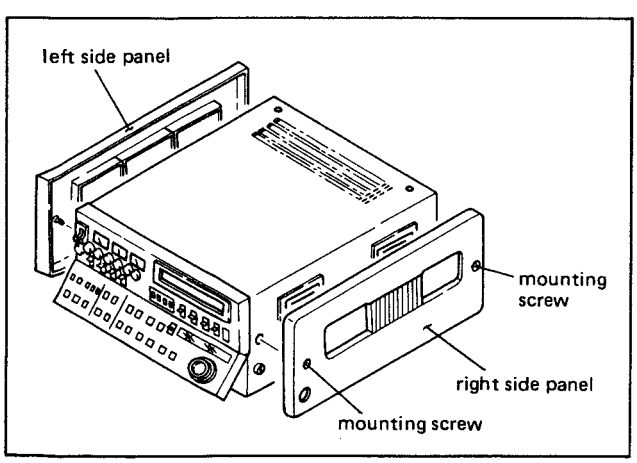
(variable range of preset level : -11dB to +5dB)

2-7. RACK MOUNTING

The BVW-40P can be mounted in the 19-inch standard rack. It is recommended to use the RACK MOUNT KIT, BK-805, optional parts (including the slide rails and the handle bracket) or the following ACCURIDE'S slide rail.

RACK-MOUNT SLIDES MODEL 305
SLIDE LENGTH 22 INCH

1. Loosen two mounting screws on the right and the left side panels.
   . Mounting screws will not be detached since it use a retainer on the inside the panel.

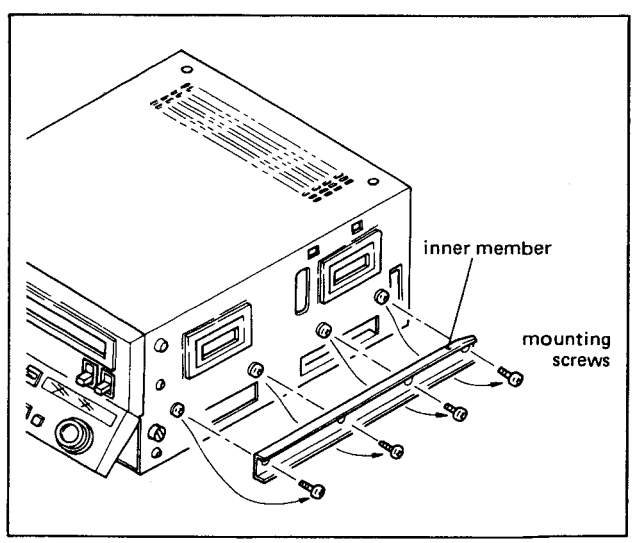


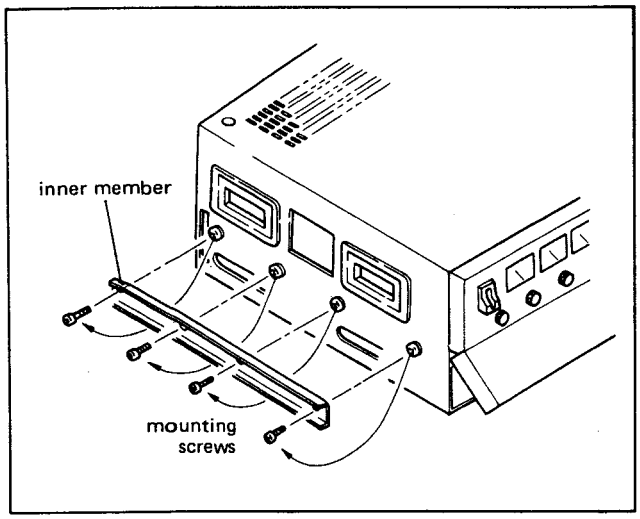
2. Remove the each four mounting screws on the (R) chassis and the (L) chassis.

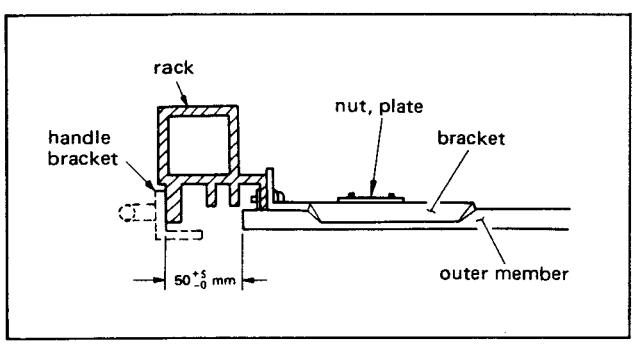
3. Attach the inner members of the slide rails to the (R) chassis and the (L) chassis with the screws removed in step (2).
   . Length of the screws used for the attachment is limited. If the screws supplied with the chassis are lost, a screw less than 10mm in length must be used.
   . The inner member must be fixed at three points with the screws.

4. Remove the four legs located under the set.
   . If the set is mounted in the rack without removing the legs. It will contact the lower set and the upper set cannot be pulled out from the rack.

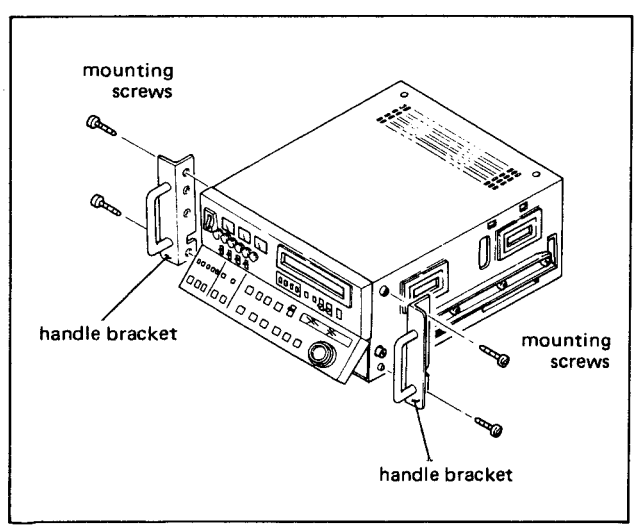
5. Attach the outer member bracket of the slide rail to the rack and position from the edge of the slide rail to the outside of the rack so that the position statisfies to the specified value.





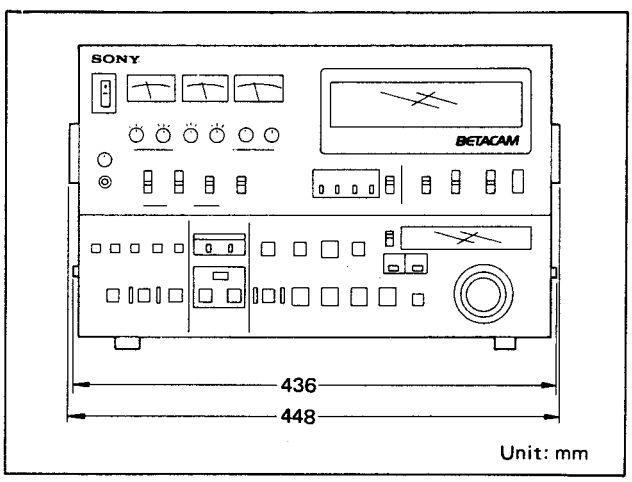


6. Attach the handle brackets.



NOTE:

1. When the several sets are mounted on the rack, it is recommended to install the fan for ventilation. Good air circulation is essential to prevent internal heat buildup in the rack. 5 C to 40 C environmental condition must be met throughout all units.
2. Never remove the upper panel and the bottom plate at the rack mounting.
3. Be sure to stabilize the rack to the floor to avoid the accidents when the BVW-40P is pulled out.
4. Dimension without side panels are shown in figure. If the rack front width is narrower than the set width, the set must be mounted after the handles on the right and left made been removed.



2-8. SUPPLIED ACCESSORY

Supplied BVW-40P accessories are as follows.

1. AC Power Cord
2. 9-Pin Remote Control Cable, RCC-5G
3. 12-pin dubbing cable
4. Extension board, EX-35, EX-36, and EX-42.

2-9. OPTIONAL ACCESSORY

The followings are provided as the optional accessory. The suitable accessory should be used for each system.

1. Rack Mount Kit (BK-805)
   The rack mount kit is used for mounting the BVW-40P on the 19-inch standard rack.

2. Cleaning Cassette Tape (HG-5CL)

SECTION 3
TECHNICAL INFORMATION

3-1. SPECIFICATIONS

Mechanical

Weight 38.7kg (85lb 5oz)

Dimensions 454 x 264 x 550mm (w/h/d) (17 7/8 x 10 1/2 x 21 3/4 inches)

Operating position Horizontal (within 30°)

Tape transport mechanism
Betacam system

Video cassettes HG-20 cassette (½inch cassette for Beta format) and equivalent

Tape speed 101.5mm/s

Playback time 20 min. max. with an HG-20 cassette

Wow/flutter Less than 0.2% (DIN)

Fast forward/rewind time
Less than 90sec. with an HG-20

Search speed SHUTTLE: still, 1/30, 1/10, 1/5, 1/2, 1, 2, 5 and 10 times normal in forward and reverse directions.
JOG: still to 1 in forward and reverse directions

Connectors
- AC IN : 3-wire parallel ground
- VIDEO IN : BNC connectors
- VIDEO OUT 1/2: BNC connectors
- AUDIO IN CH-1/CH-2 : XLR female connectors
- AUDIO OUT CH-1/CH-2/MONITOR : XLR male connectors
- DUB/COMP IN : 12-pin male connector
- DUB/COMP OUT : 12-pin female connector
- DUB(U-matic) OUT : 7-pin female connector
- REMOTE 1 : 9-pin connector
- REMOTE 2 : 36-pin connector
- MONITOR : 8-pin connector
- TBC REMOTE : 15-pin male connector
- REF VIDEO IN : BNC connectors
- REF VIDEO OUT : BNC connector
- TIME CODE IN : XLR female connector
- TIME CODE OUT : XLR male connector
- HEADPHONES : JM-60 stereo phone jack

Operating temperature
+5°C to +40°C (41°F to 104°F)

Storage temperature
-20°C to + 60°C (-4°F to +140°F)

Electrical

Power requirements AC90 to 265V, 48 to 64Hz

Power consumption 280W

Video

Video recording system
- Luminance : FM
- Chrominance: compressed time division multiplex FM

Bandwidth
- Luminance : 25Hz to 4.0MHz +0.5dB,-6.0dB
- Chrominance: R-Y, 25Hz to 1.5MHz +0.5dB, -3.0dB
  B-Y, 25Hz to 1.5MHz +0.5dB, -3.0dB

Signal to noise ratio
- Luminance : More than 46dB
- AM : More than 49dB
- PM : More than 49dB

K-factor (2T pulse)
Less than 3%

DG Less than 3%

DP Less than 3°

Y/C delay Less than 20ns

Input
- REF. VIDEO IN composite video, 1.0Vp-p ± 0.3V 75ohms ON/OFF
- VIDEO IN composite video, 1.0Vp-p, 75ohms ON/OFF
- DUB/COMP IN
  - Luminance : 1.0Vp-p, 75ohms, sync negative
  - Chrominance: R-Y, 0,7Vp-p, 75ohms
    B-Y, 0.7Vp-p, 75ohms

Output
- VIDEO OUT 1 composite, 1.0Vp-p, 75ohms, sync negative
- VIDEO OUT 2 composite, 1.0Vp-p, 75ohms, sync negative
  non-composite, 0.7Vp-p, 75ohms
- DUB OUT (U-matic)
  - Luminance : 0.5Vp-p, (75ohm load permissible), sync negative
  - Chrominance: 0.5Vp-p, (75ohm load permissible, SC low-range conversion)
- DUB/COMP OUT
  - Luminance : 1.0Vp-p, 75ohms, sync negative
  - Chrominance: R-Y, 0.7Vp-p, 75ohms
    B-Y, 0.7Vp-p, 75ohms

Audio

Frequency response
50Hz to 15kHz ± 3.0dB

Signal to noise ratio
More than 50dB (at 3% distortion level, without the audio NR system)

Distortion Less than 2% (1kHz reference level)

Input
- AUDIO IN CH-1/CH-2
  - LOW : -60dB, 3kohms, balanced
  - HIGH : +4dB, 600ohms/10kohms,balanced
- TIME CODE IN 0.5V to 18Vp-p, 3kohms, unbalanced

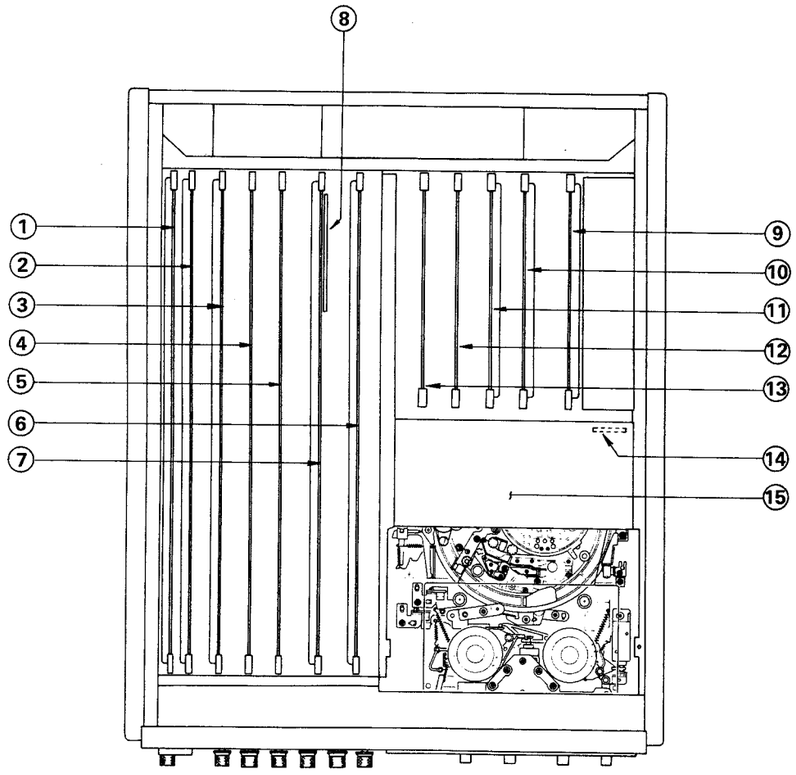
Output
- AUDIO OUT CH-1/CH-2/MONITOR
  +4dB, low impedance, balanced (600 ohm load permissible)
- TIME CODE OUT
  2.2Vp-p ± 3dB (600ohm),
  1.2Vp-p ± 3dB (75ohm),unbalanced

Processor adjustment range

Video level	± 3dB
Chroma level	± 3dB
Black level	0 to +15 IRE
System SC phase	360°p-p
System sync phase	-1 to +3 usec.
Y/C delay	± 50ns

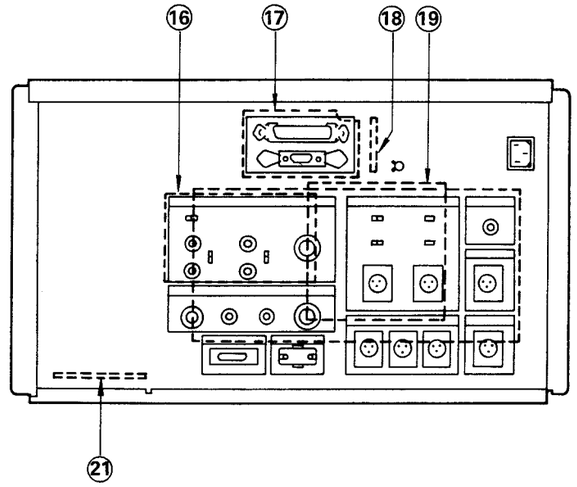
3-2. LOCATION OF THE PRINTED CIRCUIT BOARD

TOP VIEW

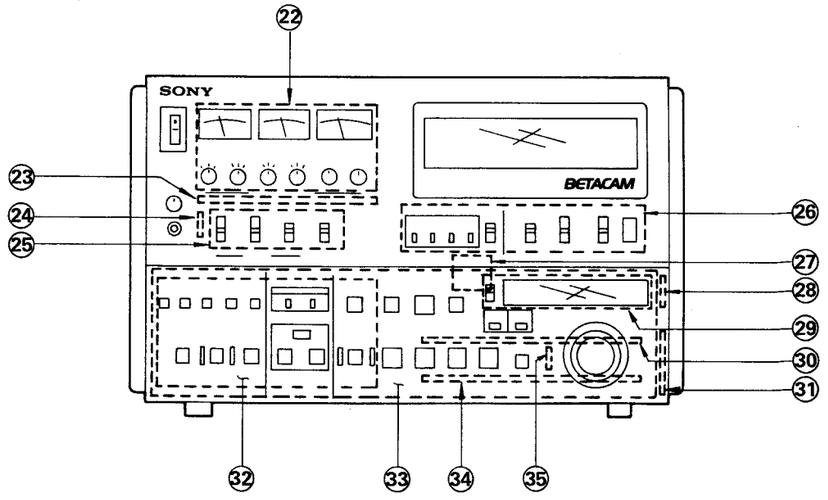


① CK-14P board
② MY-17 board
③ PR-48PS board
④ EN-21P board
⑤ YC-14P board
⑥ SY-4 board
⑦ SV-55P board
⑧ SV-60 board
⑨ AU-46 board
⑩ AU-45 board
⑪ DEC-9 board
⑫ DEC-8P board
⑬ CC-15P board
⑭ RE-10 board
⑮ RP-15P board

REAR VIEW

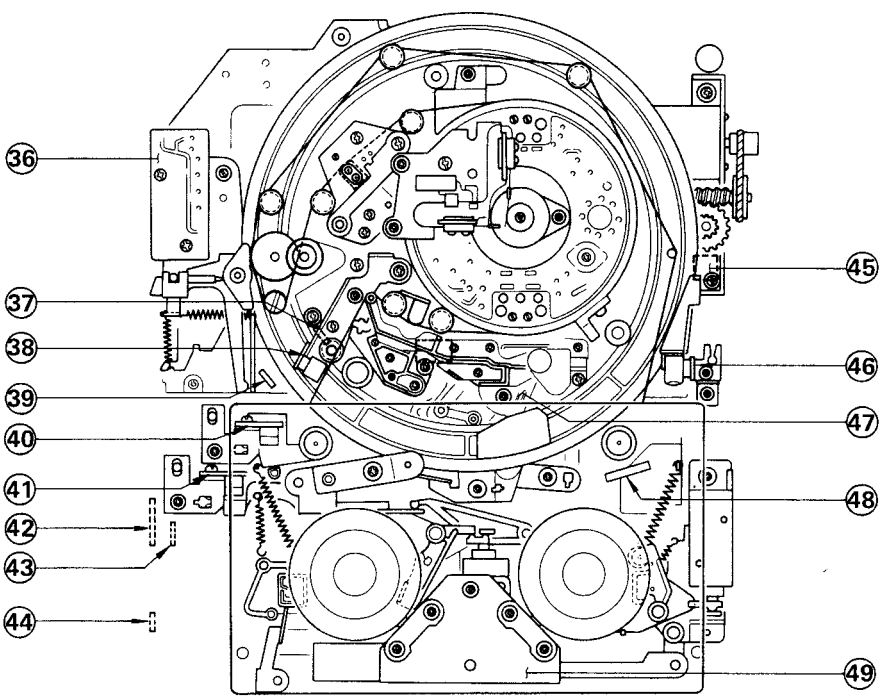


FRONT VIEW



⑯ CP-62 board
⑰ RM-24 board
⑱ AC-44 board
⑲ SD-6P board
⑳ CP-61 board
㉑ BC-6 board
㉒ BF-7 board
㉓ VR-10 board
㉔ HP-11 board
㉕ SW-6 board
㉖ SW-7 board
㉗ DU-53 board
㉘ PC-9 board
㉙ DP-31 board
㉚ DR-21P board
㉛ BC-5 board
㉜ CP-74P board
㉝ KY-45 board
㉞ TC-28P board
㉟ PC-14 board

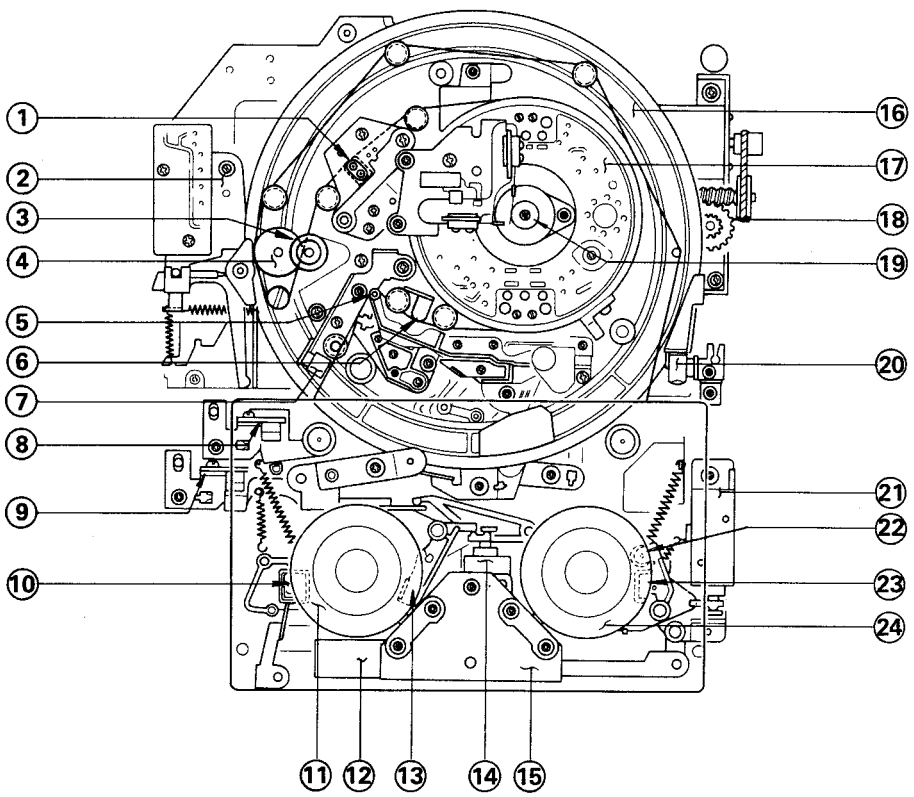
TOP VIEW



36 PD-22 board
37 PH-16 board
38 SS-8 board
39 LE-19 board
40 TE-2 board
41 TE-2 board
42 CL-7 board (cassette-up compartment)
43 PC-18 board (cassette-up compartment)
44 PC-17 board (cassette-up compartment)
45 LM-4 board
46 SS-8 board
47 TR-18 board
48 MS-12 board
49 DE-11 board

3-3. LOCATION OF THE MECHANICAL MAIN PARTS/COMPONENTS

TOP VIEW



① Audio/TC head
② Pinch solenoid block
③ Capstan shaft
④ Pinch roller
⑤ Supply tension regulator
⑥ CTL head
⑦ Tape end sensor
⑧ Threading end detector
⑨ Threading end/unthreading end detector
⑩ Supply reel main brake
⑪ Supply reel table
⑫ Main brake solenoid
⑬ Supply reel soft brake
⑭ Supply reel brake solenoid
⑮ Reel table rotation detector
⑯ Threading ring
⑰ Head drum
⑱ Threading gear box
⑲ Slip ring
⑳ Tape beginning sensor
㉑ Take-up reel brake solenoid
㉒ Take-up reel brake
㉓ Take-up reel main brake
㉔ Take-up reel table

3-4. PRINTED CIRCUIT BOARDS

The circuit information is provided below.

System	Board	Circuit function
Video	RP-15P	REC/PB amplifier
	YC-14P	Y/C modulator and demodulator
	DU-73	RF AGC
	SD-6P	Reference sync generator
	SD-8	Burst V axis alternator
	BC-5	Blanking switcher
	CC-15P	Chroma compressor
	CK-15P	Clock generator
	DEC-9	YC separator
	DEC-8P	Decoder
	EN-21P	Encoder
	RE-10	Rotary erase
Audio	AU-45	Audio system
	AU-46	Audio system
	BC-6	Blanking switcher
	BF-7	Audio buffer
	DR-21P	Bias erase osc
	HP-11	Headphones jack
	VR-10	Level control
Servo	SV-55P	Servo system
	SV-60	Servo system
	RD-2	Reel driver
	DE-11	Reel FG
	DU-53	Reel FG amplifier
Time code	DR-21P	Time code REC/PB
	TC-28P	Time code generator and reader
TBC	MY-17	Video TBC
	PR-48PS	Video TBC
	CK-14P	Video TBC
	CP-74P	TBC control panel

System	Board	Circuit function
System control	SY-4	System control
	MS-12	Miss-recording switch (photo-transistor)
	KY-45	Key panel
	KY-47	Select switch
	PT-9	Power transistor
	DP-31	Time counter display
	PC-9	Search dial
	PC-14	Search dial
	PD-22	Pinch solenoid
	PH-16	Tape roll sensor (photo-transistor)
	LE-19	Tape roll sensor (LED)
	RM-24	Remote connector
	SS-8	Tape beginning sensor Tape end sensor
	TR-18	Tape tension sensor
	SW-6	Select switch
	SW-7	Select switch
	SW-8	Select switch
	SW-13	Select switch
	TE-2	Threading/Unthreading end detector
	DR-21P	Driver
	LM-4	Threading motor
Power	AC-44	Line filter
Other	MB-49	Mother board
	MB-50	Mother board (for video and audio)
	MB-52	Mother board (for DR-21P and TC-28P)
	MB-73	Mother board (for TBC)
	PC-17	Cassette-up compartment
	PC-18	Cassette-up compartment
	CL-7	Cassette-up compartment

System	Board	Circuit function
Other	CP-61	Input amplifier
	CP-62	Relay board for input video
	HE-5	Relay board
	EX-35	Extension board
	EX-36	Extension board
	EX-42	Extension board

SECTION 4
PERIODIC CHECK AND MAINTENANCE

4-1. SYSTEM CONTROL OPERATION CHECK

It is recommended that the following is checked daily before the operation.
The check procedure described here is only for the BVW-40P but can be applied on the operation with the remote control unit.
Note that the switches must be set according to the way the machine is used after the checks.

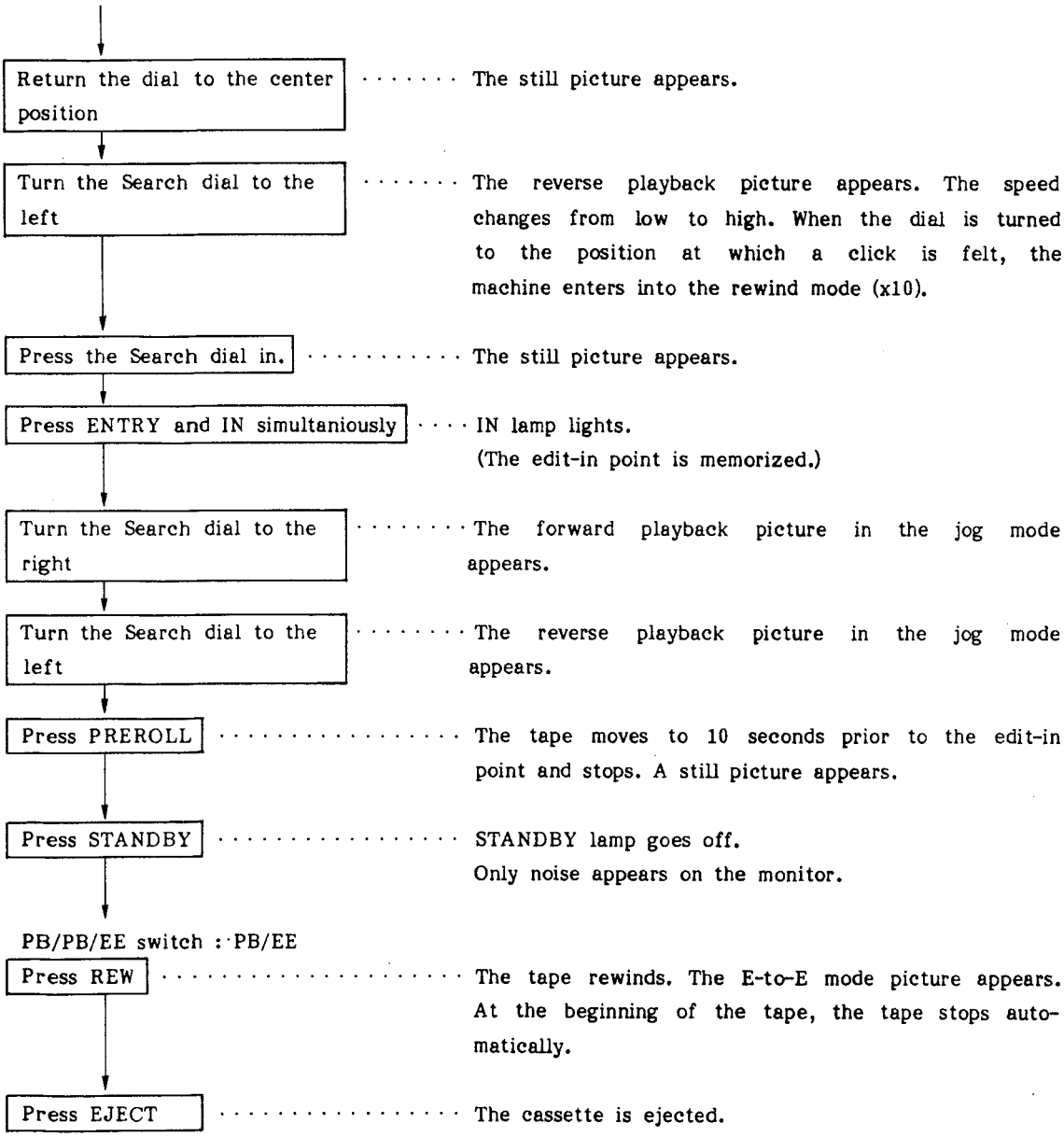
4-1-1. Play Back, F.FWD, REW, SHUTTLE, JOG and Preroll Function Check

. Thread a recorded tape (Video, Audio CH-1/CH-2). (Do not utilize an alignment tape.)
. Internal switch setting : The following are the procedures when the SEARCH mode KEY/DIAL DIRECT switch on the SY-4 boad is in the OFF position. When it is in the ON position, the procedure indicated within the bold line is not necessary to perform. (Please refer to sec.2-6 for further detail on this switch.)

With switches set to :

POWER	ON
REMOTE/LOCAL	LOCAL
PB/PB/EE	PB
AUDIO MONITOR	MIX

Action	Check that
Insert the cassette	
Press F.FWD	High speed the playback picture appears and the video and audio are not muted.
Press STOP	A still picture appears.
Press PLAY	The playback picture appears. Audio CH-1 and CH-2 are present.
Press SHUTTLE/JOG	
Turn the Search dial to the right	The playback speed changes from low to high. When the dial is turned to the position at which a click is felt, the machine enters into the fast forward mode (x10).

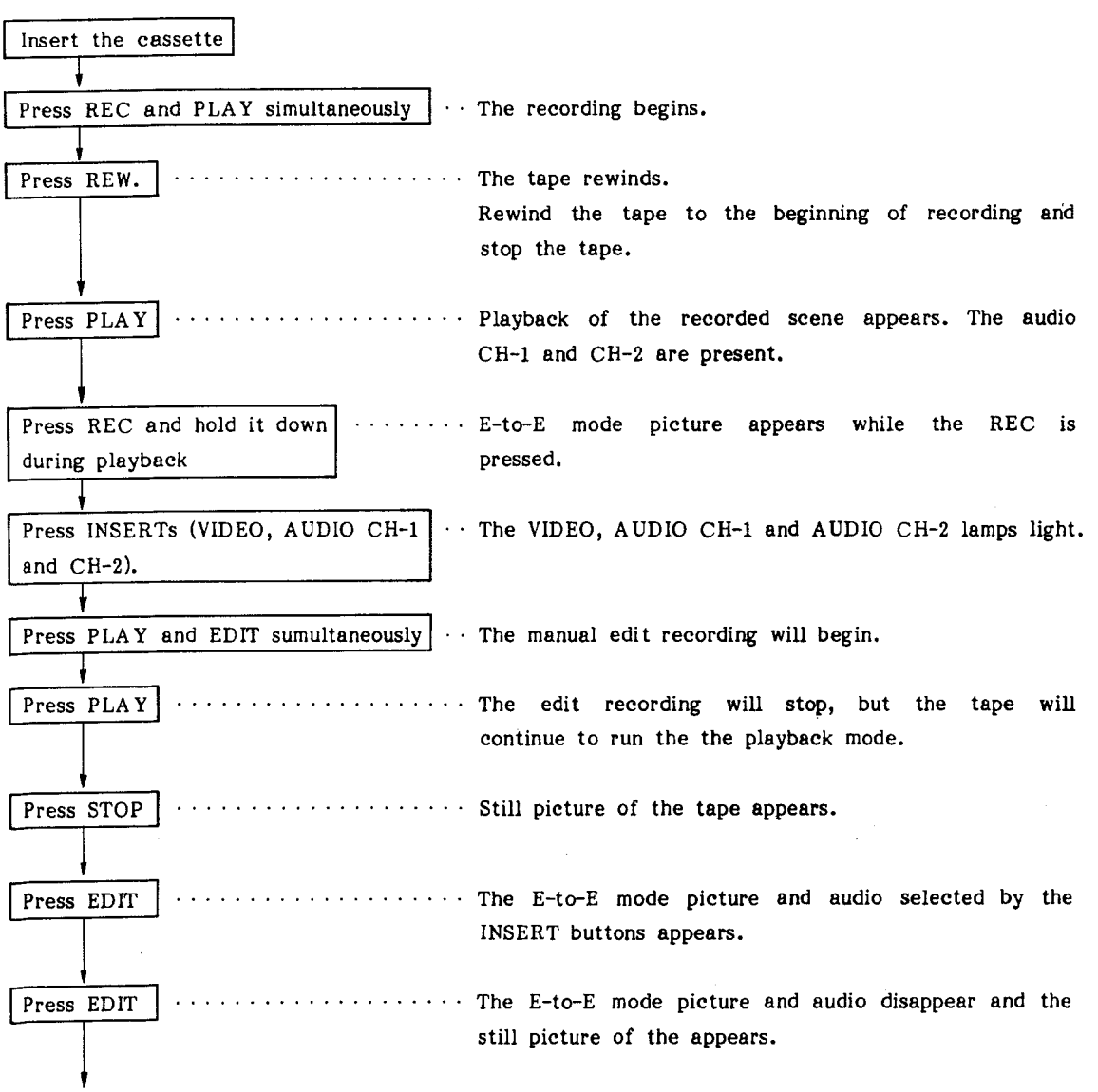

Return the dial to the center position
The still picture appears.
Turn the Search dial to the left
The reverse playback picture appears. The speed changes from low to high. When the dial is turned to the position at which a click is felt, the machine enters into the rewind mode (x10).
Press the Search dial in.
The still picture appears.
Press ENTRY and IN simultaniously
IN lamp lights.
(The edit-in point is memorized.)
Turn the Search dial to the right
The forward playback picture in the jog mode appears.
Turn the Search dial to the left
The reverse playback picture in the jog mode appears.
Press PREROLL
The tape moves to 10 seconds prior to the edit-in point and stops. A still picture appears.
Press STANDBY
STANDBY lamp goes off.
Only noise appears on the monitor.
PB/PB/EE switch : PB/EE
Press REW
The tape rewinds. The E-to-E mode picture appears. At the beginning of the tape, the tape stops automatically.
Press EJECT
The cassette is ejected.

4-1-2. Record Function Check

- Insert a video cassette tape on which recording can be made.
- Connect signals to the VIDEO IN, AUDIO IN CH-1 and CH-2 connectors.
- Connect a video and audio monitor.

With switches set to :

POWER	ON
REMOTE/LOCAL	LOCAL
INPUT SELECT	LINE
PB/PB/EE	PB
AUDIO MONITOR	MIX



PB/PB/EE switch : PB/EE

Press REW ..... The tape rewinds.
Rewind the tape to the beginning of edit-recording and stop the tape.

Press PLAY ..... Playback of the edit-recorded video appears. The audio CH-1 and CH-2 are present.

Press F.FWD ..... The tape advances rapidly and stops at the end of the tape. Then the tape rewinds automatically and stops at the beginning.

Press EJECT ..... The cassette is ejected.

4-1-3. Editing Function Check

- Install a recorded tape (Video, Audio CH-1/CH-2). (Do not utilize an alignment tape).
- Apply the video and audio CH-1/CH-2 signals.
- The following are the procedures when the SEARCH mode KEY/DIAL DIRECT switch on the SY-4 board is in the ON position.

With switches set to :

POWER	ON
REMOTE/LOCAL	LOCAL
AUDIO MONITOR	MIX

Action **Check that**

Insert the cassette

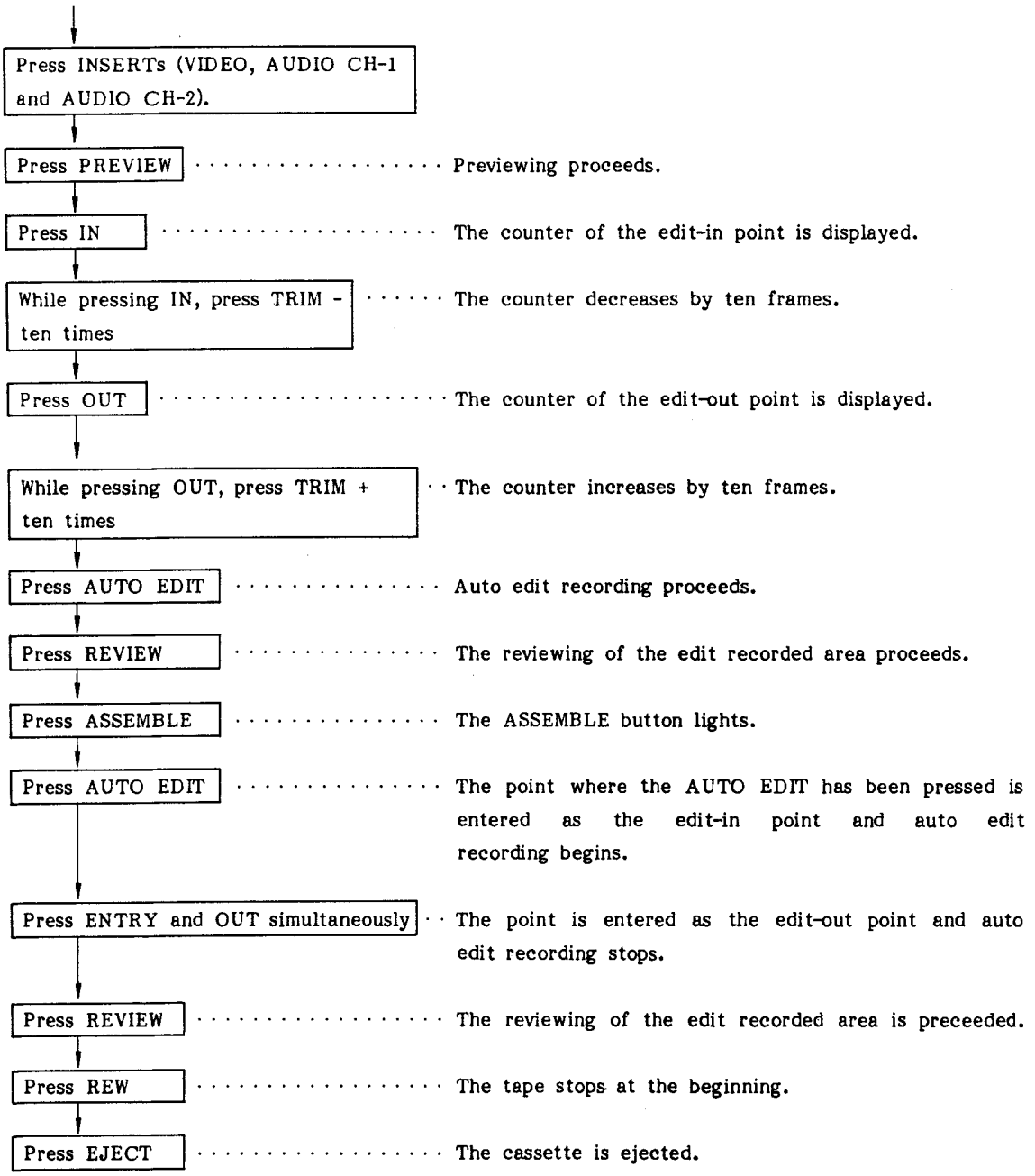
Press PLAY ..... Playback picture.

Press Search button (Search dial at position) ..... The still picture appears.

Press ENTRY and IN simultaneously .. Note the counter number of the point (edit-in).

Locate a point for the edit-out point with Search dial.

Press ENTRY and OUT simultaneously .. Note the counter number of the point (edit-out).


Press INSERTs (VIDEO, AUDIO CH-1 and AUDIO CH-2).
Press PREVIEW
Previewing proceeds.
Press IN
The counter of the edit-in point is displayed.
While pressing IN, press TRIM - ten times
The counter decreases by ten frames.
Press OUT
The counter of the edit-out point is displayed.
While pressing OUT, press TRIM + ten times
The counter increases by ten frames.
Press AUTO EDIT
Auto edit recording proceeds.
Press REVIEW
The reviewing of the edit recorded area proceeds.
Press ASSEMBLE
The ASSEMBLE button lights.
Press AUTO EDIT
The point where the AUTO EDIT has been pressed is entered as the edit-in point and auto edit recording begins.
Press ENTRY and OUT simultaneously
The point is entered as the edit-out point and auto edit recording stops.
Press REVIEW
The reviewing of the edit recorded area is preceeded.
Press REW
The tape stops at the beginning.
Press EJECT
The cassette is ejected.

4-2. MAINTENANCE TIME TABLE

It is recommended that the following periodic check and maintenance schedule be employed in order to obtain maximum performance and longer tape life from the BVW-40P.

Periodic check and maintenance schedule is going to be available soon.

4-3. HOURS METER

Open the function control panel by loosing the stopper screws on both right and left sides. The hours meter placed at the back side of the function control panel.
The hours meter accumulates and records the elapsed time of the following modes; PLAY, STOP, F.FWD, REW, REC and SEARCH modes. It is recommended that the hours meter is used as a tool for determining the periodic check. When the hours meter indicates the maximum value, 1000 hours, the hours meter must be replaced with a new one.
(SONY Part No : 1-548-100-11)

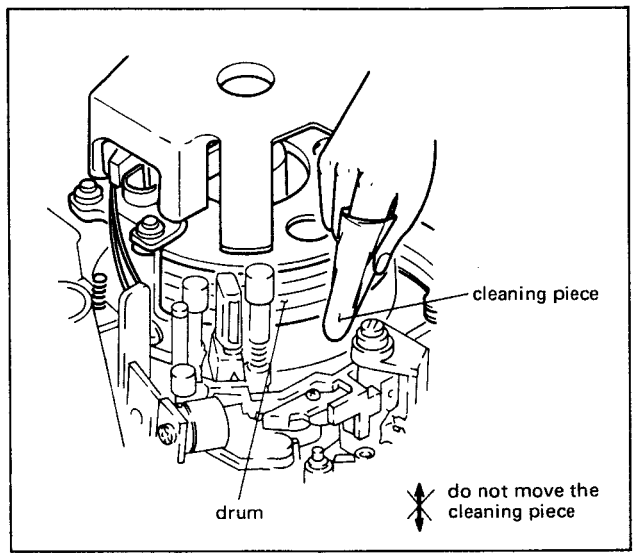
4-4. CLEANING PROCEDURE

Perform the cleaning as the following procedure. After cleaning, insert a cassette tape after the cleaning fluid evaporate completely.

4-4-1. Video Head

Press the cleaning piece moistened with the cleaning fluid and turn the drum slowly with hand.

(Note) 1 Never move the cleaning piece in the vertical direction of the head tip in the cleaning.
2 Perform the cleaning with the power OFF.



4-4-2. Stationary Heads

Clean with the cleaning piece moistened with the cleaning fluid.

4-4-3. Tape Movement Areas

Wipe the tape bearing surface (of the tape guides, drum, capstan and pinch roller) with a piece of cleaning piece moistened with the cleaning fluid.

(Note) Do not clean the surface condensation sensor on the lower drum with the cleaning cloth moistened with the cleaning fluid. Clean the surface with dry cloth.

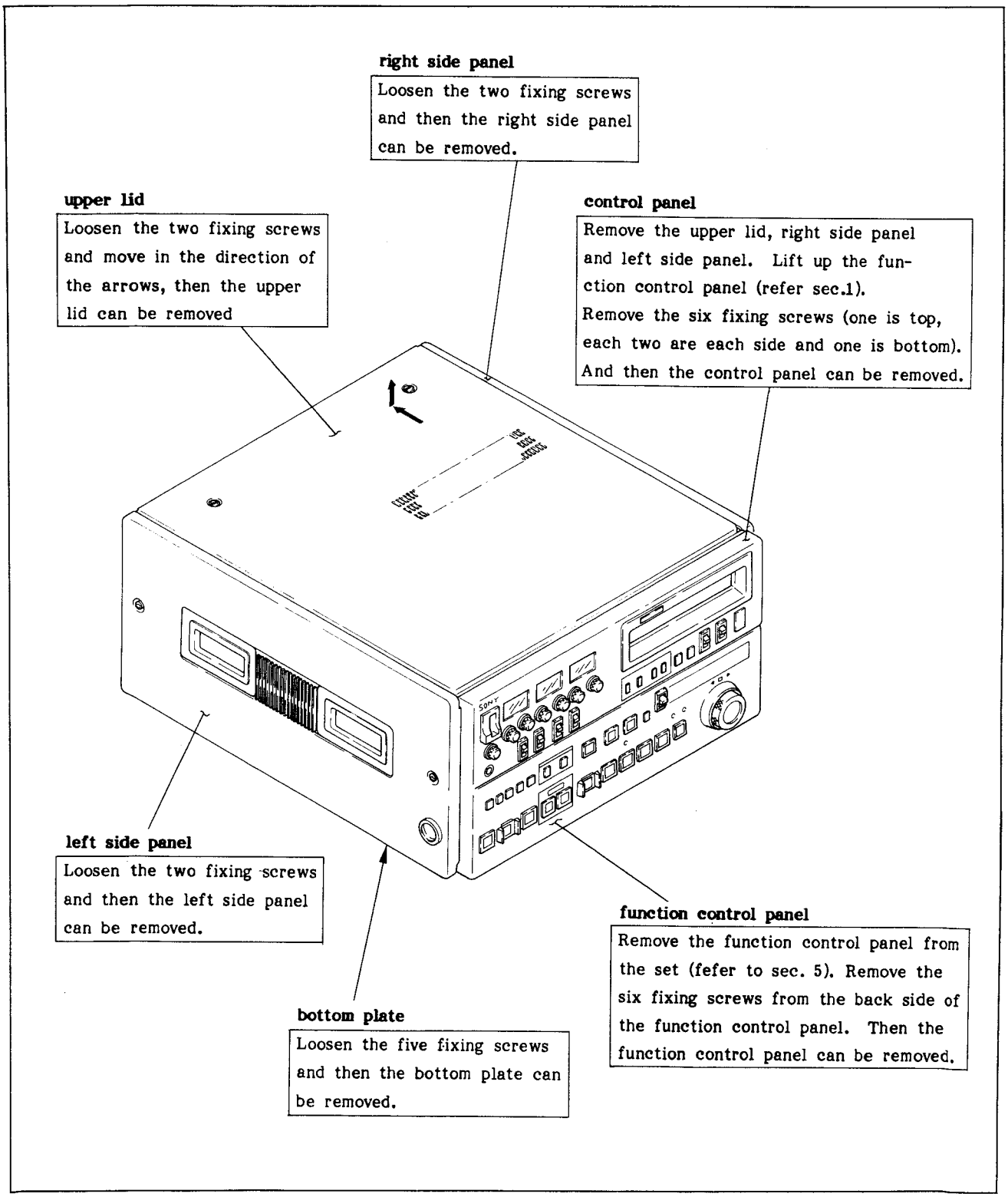
4-5. MAINTENANCE AFTER REPAIRS

Perform the following maintenance after repair without regarding the machine operating hours.

1. Video heads and stationary heads cleaning.
   (Referring sec. 4-4-1. and 4-4-2.)
2. Tape movement area cleaning.
   (Referring sec. 4-4-3.)

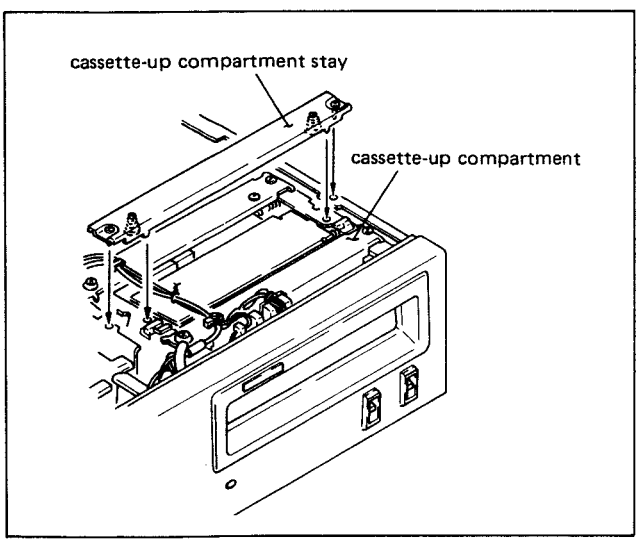
SECTION 5
SERVICE INFORMATION

5-1. REMOVAL OF CABINET



5-2. REMOVAL OF CASSETTE-UP COMPARTMENT

1. Loosen the two fixing screws of the cassette-up compartment stay.
2. Disconnect the connector, CN-801 of the cassette-up compartment.
3. Bring up the cassette-up compartment from the machine.



5-3. NOTE FOR CHECK AND MAINTENANCE OF PRINTED CIRCUIT BOARD

Be sure to turn off power before inserting or removing of the printed circuit boards.

5-4. EXTENSION BOARD

The three types of the extension board are supplied in the machine. The Amp chassis printed circuit boards can be serviced using the extension board. Simply insert the extension board into the Amp chassis and connect the circuit board to be serviced to the end of the extension board.

(CAUTION)

When you install the AU-45, AU-46, DEC-9, DEC-8P or CC-15 to the end of the EX-36 board, pay more attention to the direction of the printed circuit board.

The component side of the above mentioned board should be placed in the direction of the large size printed circuit boards such as CK-14P, MY-17, PR-48PS and so on.

If you install the opposite direction, the dc power circuit will be blown up.

5-5. SPARE PARTS

1. Safety Related Components Warning.
   Components identified by shading marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony parts whose part numbers appear in this manual or in service bulletins and service manual supplements published by Sony.

2. Replacement Parts supplied from Sony Parts Center will sometimes have a different shape from the original parts. This is due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts".
   This manual's exploded views and electrical spare parts list indicate the parts numbers of "the standardized genuine parts at present". Regarding engineering parts changes in our engineering department, refer to Sony service bulletins and service manual supplements.

3. The parts as shwon "s" in SP space on the exploded views and electrical spare parts list are normally stocked for replacement purposes. The parts as shown "o" in SP space are not normally required for routine service work. Orders for parts as shown "o" will be precessed, but allow for additional delivery time.

5-6. TO OPERATE THE MACHINE WITHOUT INSTALLING CASSETTE TAPE

The following procedures are described without installing the cassette-up compartment.

1. Threading

. Turn power on.
  The threading ring rotates in the counterclockwise direction automatically, and set is put into the threading completion mode.

2. PLAY

Press PLAY button after the set is put into the threading completion mode. Then set is put into PLAY mode.

3. Unthreading

Press EJECT button. The threading ring rotates in the clockwise direction. Turn off power quickly after the set is put into the unthreading completion mode. (If the power does not turn off, the set is put into the threading mode again.)

4. Search

Turn SEARCH dial after the set is put into the threading completion mode.

5. F.FWD and REW

The F.FWD and REW modes cannot be obtained by only pressing the F.FWD or REW button. (Because the tape roller guide on the threading ring does not rotate.)
Then set the S5-8 switch on the SY-4 board to the ON position. Press the F.FWD or REW button. The set is put into the F.FWD or REW mode.
After adjustment, the S5-8 switch must be set to OFF position.

6. REC

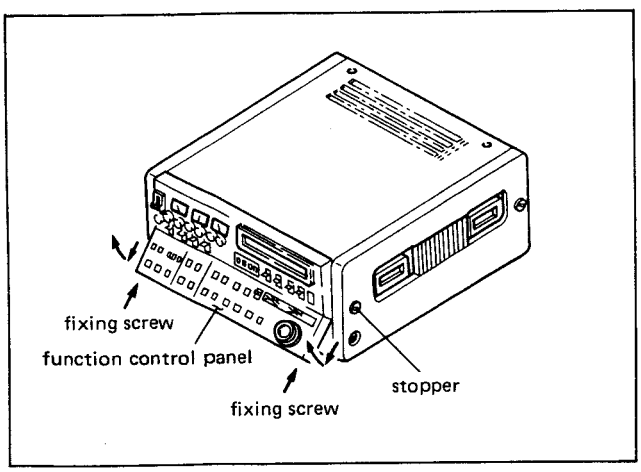
Press PLAY and REC button while pressing the MISS-REC switch after the set is put into the threading completion mode.
The REC mode is cancelled by removing a finger from the MISS-REC switch.

5-7. MAINTENANCE OF KY OR DU BOARD

When perform the maintenance of the KY board or DU board, it is recommended to remove the function control panel block from the set.

The function control panel removal procedures are as follows;

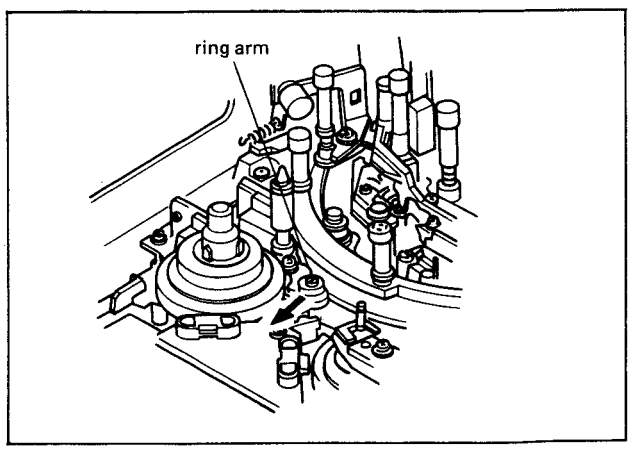
1. Loosen the function control panel stopper on the right and left side panels. Open the function control panel.
2. Remove the two fixing screws as shown in figure and move the panel in the direction shown by the arrows.



5-8. CASSETTE REMOVAL PROCEDURE WHEN THE TAPE IS SLACKEN IN THE MACHINE

When the tape is slacken in the machine, remove the cassette tape as the following procedures;

1. Turn power off.
2. Turn the pulley of the gear box block until the pinch roller comes in front of the audio head while pushing the ring arm in the direction of the arrow. .
3. Remove the tape that is remaining on the threading ring from the tape guides carefully so that it does not damage.
4. Remove the cassette-up compartment stay.
5. Disconnect the connector, CN801 of the cassette-up compartment.
6. Bring up the cassette-up compartment with cassette tape in it slowly so that the tape does not damage.
7. Wind the tape into the cassette tape by turning the reel hub on the back of the cassette tape with finger.
8. Turn the worm gear of the cassette-up compartment by hand in order to place the cassette-up compartment into the up state. Remove the cassette tape.
9. Locate the cause of the trouble and remedy the problem.



5-9. FIXTURE

Part Number	Description	For Use
J-6001-820-A	Drum Eccentricity Gauge (3)	Upper drum eccentricity adjustment
J-6001-830-A	Drum Eccentricity Gauge (2)	
J-6001-840-A	Drum Eccentricity Gauge (1)	
J-6087-000-A	Drum Eccentricity Gauge (5)	
J-6080-008-A	Cassette Reference Plate	Reel table adjustment
J-6080-011-A	Reel Table Tension Gauge	Brake torque adjustment
J-6080-013-A	Dihedral Adjustment Screw	Video head dihedral adjustment
J-6086-570-A	Flatness Plate	Audio head zinith adjustment
J-6150-960-A	Reel Motor Shaft Slantness Check Jig	Reel motor shaft slantness adjustment
J-6190-800-A	Tension Regulator Slantness Check Tool	Tension regulator slantness adjustment
Y-2031-001-0	Cleaning Fluid	Cleaning
2-034-697-00	Cleaning piece	
7-732-050-01	Tension Scale (20g full scale)	Tension adjustment
7-732-050-20	Tension Scale (50g full scale)	
7-732-050-30	Tension Scale (100g full scale)	
7-732-050-50	Tension Scale (500g full scale)	
7-723-902-00	Inspection Mirror	Video tracking adjustment
8-960-098-02	Alignment Tape, CR2-1PS	Video tracking tape
9-960-098-22	Alignment Tape, CR5-1PS	Video,audio and servo alignments for recorder and player
9-911-053-00	Thickness gauge	Clearance check
Standard Products	Head Demagnetizer (HE-3)	Head demagnetize

SECTION 6
REPLACEMENT OF MAJOR PARTS

6-1. REPLACEMENT OF REEL MOTOR

Mode: Unthreading end

Tool: Allen wrench (each edge has 1.5mm)

Replacement procedure:

(1) Remove the reel table. (See sec. 6-2)

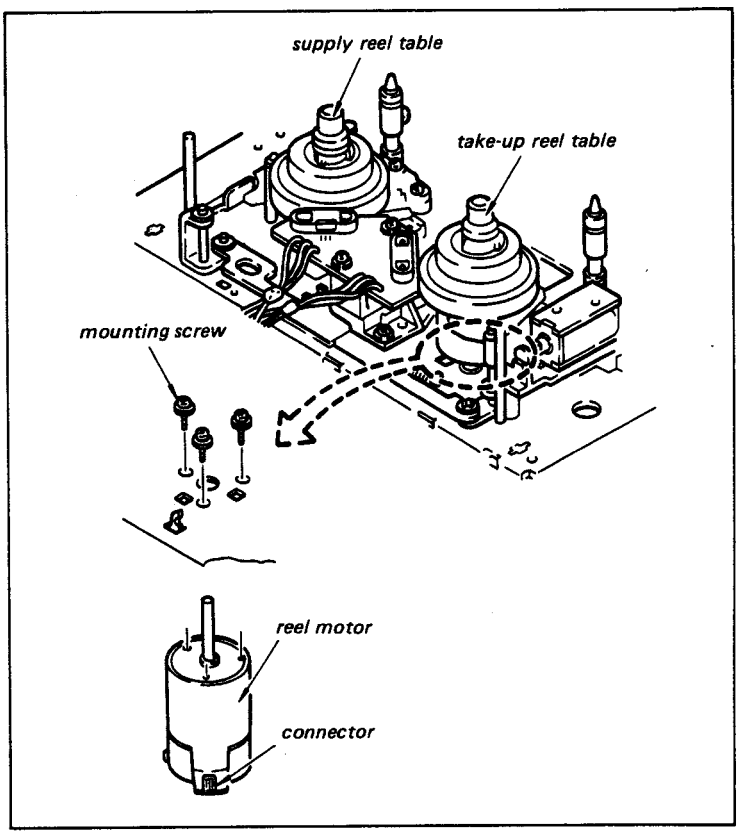
(2) Disconnect the connector of the reel motor.

(3) Remove the mounting screws of the reel motor on the front of the chassis.

(4) Place the connector of the reel motor in the direction as shown in figure, and install the reel motor.

(5) Insert a poly-slider-washer on the reel shaft.

(6) Perform the adjustment as sec 6-13.



6-2. REPLACEMENT OF REEL TABLE

6-2-1. Replacement of Supply Reel Table

Mode: Unthreading end

Tool: Allen wrench (each edge has 1.5mm)

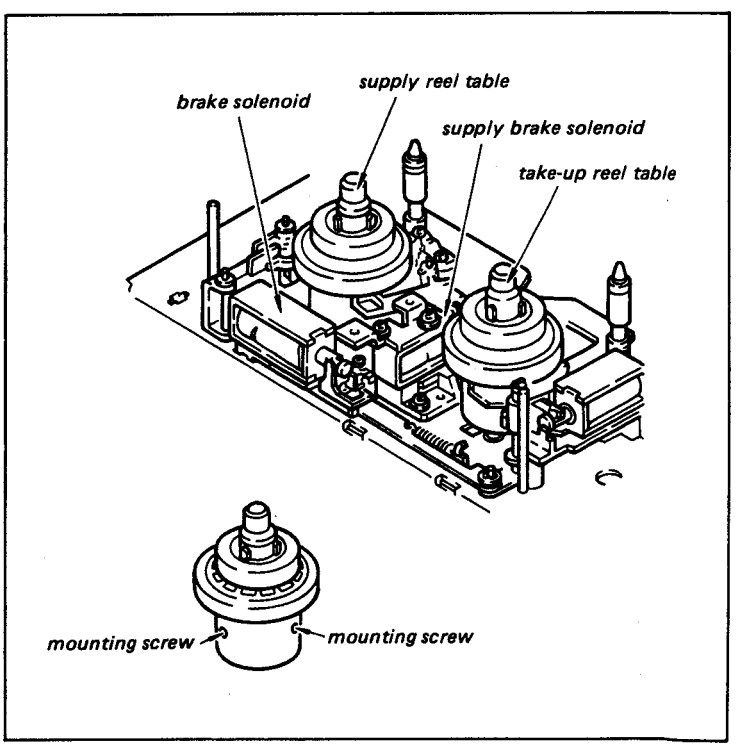
Replacement procedure:

(1) Loosen the two fixing screws of the reel table with allen wrench and remove it.

(2) Push the iron core of the brake solenoid into the energized position.
Push the iron core of the S brake solenoid into the energized position.

(3) While pushing the iron cores of the two solenoids, install the new reel table to the reel motor shaft.

(4) Perform the adjustment as sec 6-13.



6-2-2. Replacement of Take-up Reel Table

Mode: Unthreading end

Tool: Allen wrench (each edge has 1.5mm)

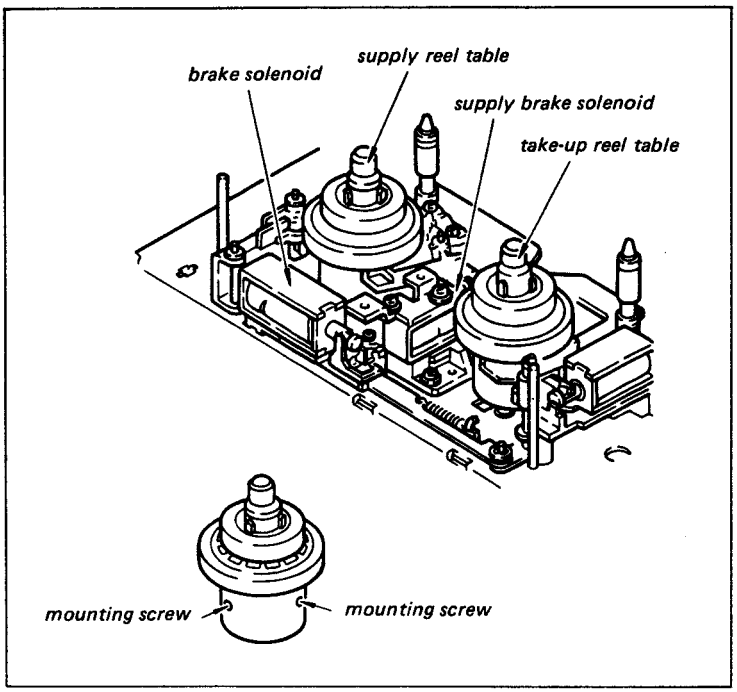
Replacement procedure:

(1) Loosen the two fixing screws of the reel table with allen wrench and remove it.

(2) Push the iron core of the brake solenoid into the energized position.

(3) While pushing the iron core, install the new reel table to the reel motor shaft.

(4) Perform the adjustment as sec. 6-13.



6-3. REPLACEMENT OF UPPER DRUM

. The rotary video heads cannot be replaced individually, the whole upper drum assembly must be replaced when any one of these heads fails.

Tool: Drum eccentricity gauge (1)
Drum eccentricity gauge (2)
Drum eccentricity gauge (3)
Drum eccentricity gauge (5)
Cleaning fluid
Cleaning piece

Replacement procedure:

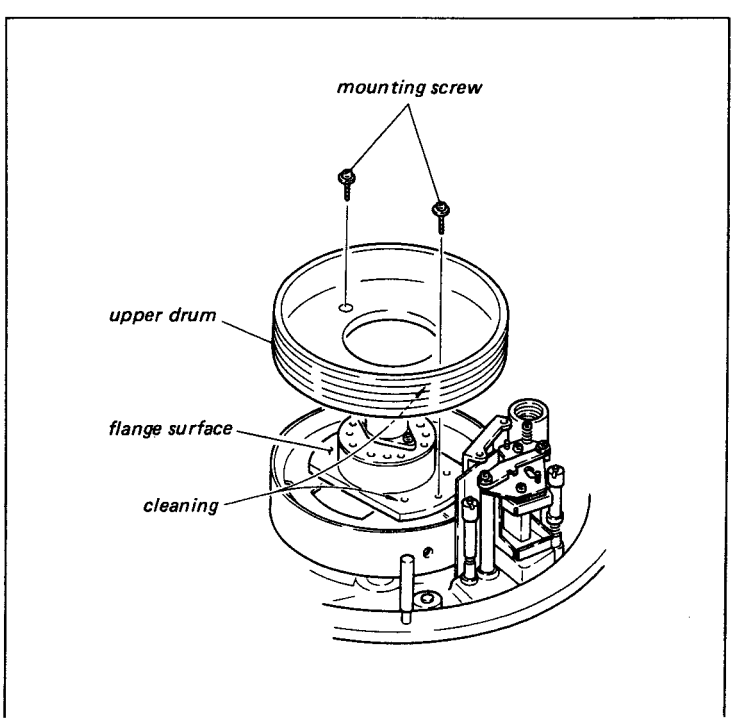
(1) Remove the cleaning roller block.

(2) Remove the brush of the slip ring.

(3) Unsolder the twelve leads from the printed circuit board on the center of drum.

(4) Remove the two screws of the upper drum and remove the upper drum.

(5) Clean the matchine surfaces of the flange and new upper drum assembly with a cleaning piece moistened with cleaning fluid. (If there is a spacer between drum and flange, it should be remain in place, or be re-installed in the same place with the new upper drum assembly. The spacer is 0.01mm, 0.03mm, 0.05mm or 0.1mm thick.)



(6) Place the upper drum assembly so that the white, yellow and orange leads are closest to the marked A of the printed circuit board and thread snugly with two screws but do not tighten.

Adjustment procedure:

(1) Remove the pinch release arm.

(2) Assemble the drum eccentricity gauges (1), (2), (3) and (5) as shown in figure. Mount the assembled gauges on the hole as shown in figure so that the tip probe positions at the point about 5mm apart from the top edge of the upper drum.

(3) Turn the upper drum slowly clockwise direction and confirm the pointer deflection of the gauge is within 5 micron during one complete turn of the upper drum. If this specification is satisfied, proceed to step (5). If it is not, perform then continue with remaining steps.

(4) Tap the upper side of the upper drum with a nylon hammer or a screwdriver handle so that the gauge deflection remains within 5 micron.

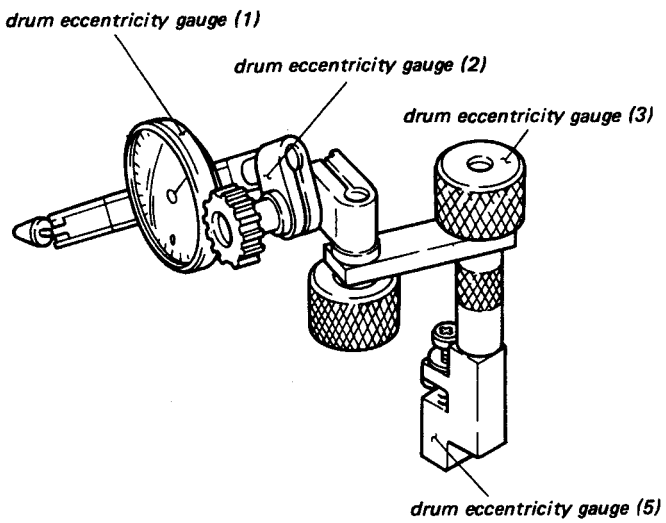
(5) After the adjustment, tighten the two screws that are securing the upper drum, alternately and gradually using a tightening torque: 8Kg.cm

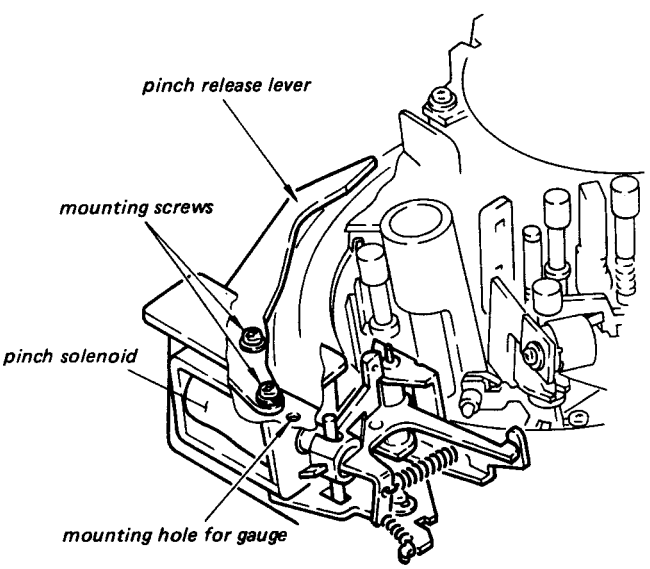
(6) After the screws are tightened, check again that the eccentricity of the upper drum is within 5 micron.

(7) Solder the twelve leads.

(8) Install the brush, the cleaning roller block and the pinch release arm.

(9) Perform the adjustment as sec. 6-13.





6-4. REPLACEMENT OF DRUM ASSEMBLY

Replacement Procedure:

(1) Disconnect the connectors, CN305/MB-52 board and CN306/MB-52 board.

(2) Disconnect the connector, CN1 and CN2/ RP-15P board.

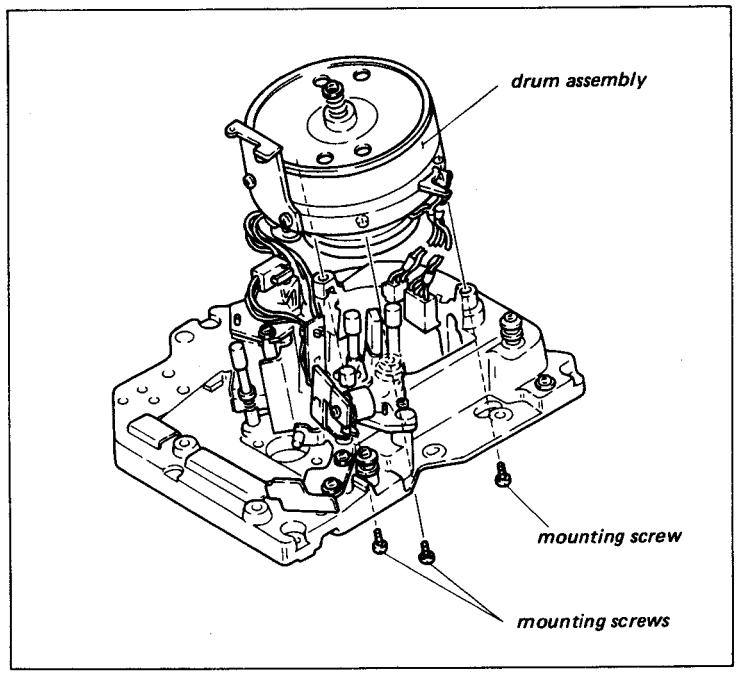
(3) Remove the brush of the slip ring block, the cleaning roller block and the harness holder by the RE board.

(4) Remove the three fixing screws on the back of the set and remove the difective drum.

(5) Install the drum on the base. Tighten the mounting screws while turning the drum ass'y in the counterclockwise direction.

(6) Connect the connectors of the drum harness.

(7) After the brush and the cleaning roller block are installed, perform the adjustment as sec. 6-13.



6-5. REPLACEMENT OF CAPSTAN MOTOR

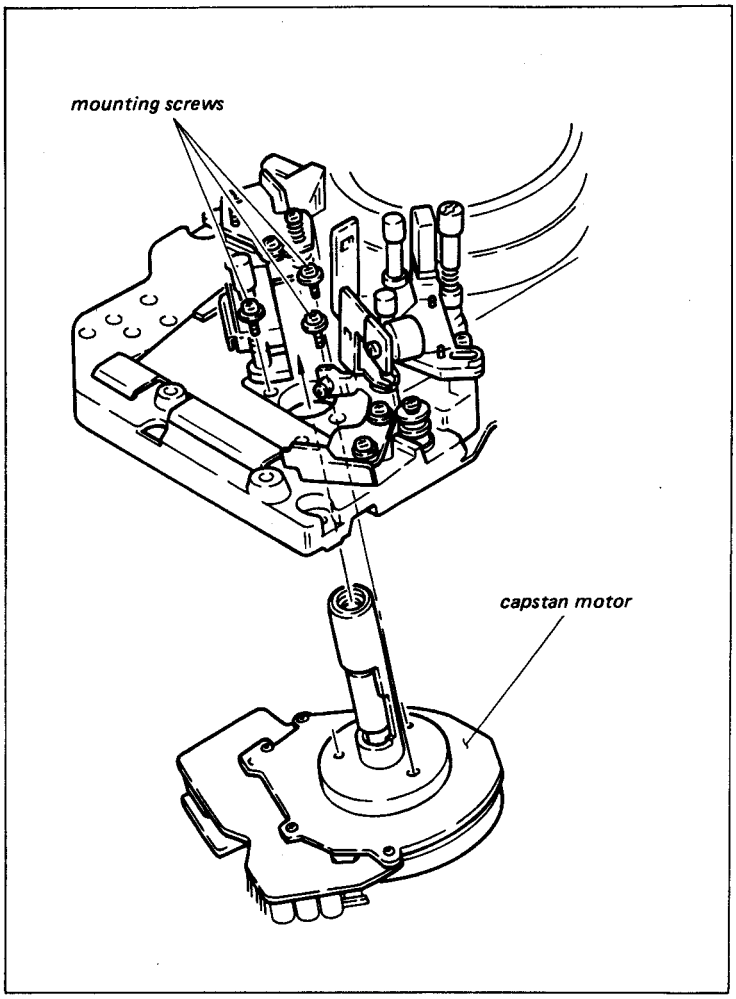
Replacement procedure:

(1) Disconnect the connector of the capstan motor.

(2) Remove the three screws as shown in figure and remove the capstan motor.

(3) Install the capstan motor. Tighten the fixing screws while turning the capstan motor in the clockwise direction viewing from top of the set.

(4) Perform the adjustment as sec. 6-13.



6-6. REPLACEMENT OF CTL HEAD

Replacement procedure:

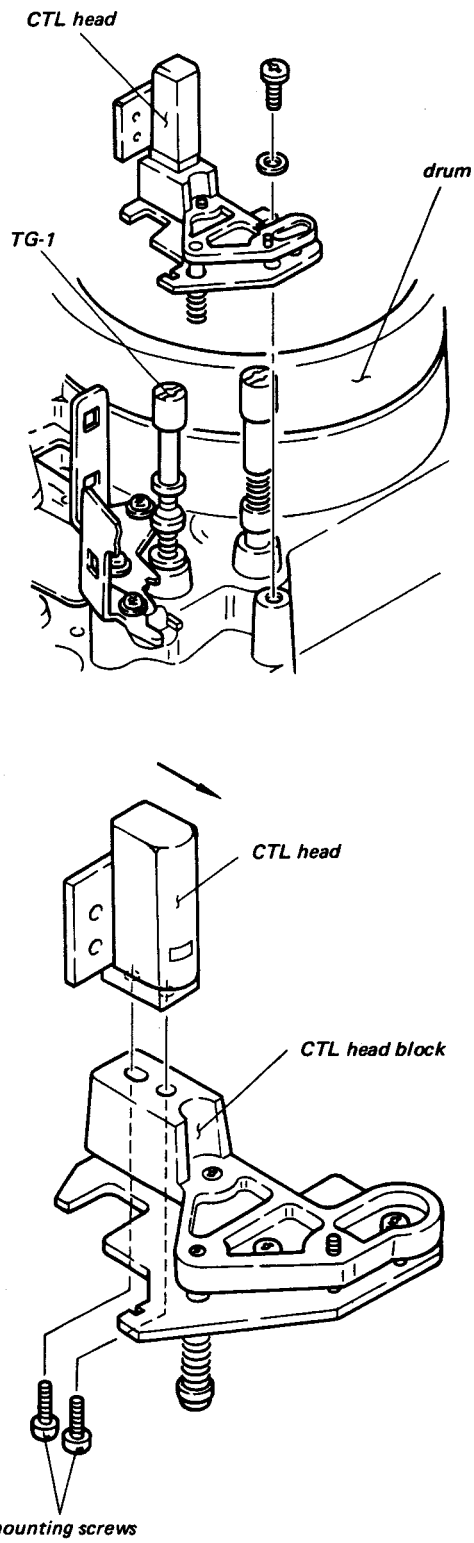
(1) Remove the CTL head block.

(2) Unsolder the leads of the board on CTL head.

(3) Remove the mounting screws of the CTL head.

(4) Install the new CTL head to the CTL head block while pressing the head in the direction as shown in figure.

(5) Install the CTL head block and perform the adjustment as sec. 6-13.



6-7. REPLACEMENT OF AUDIO/TIME CODE HEAD

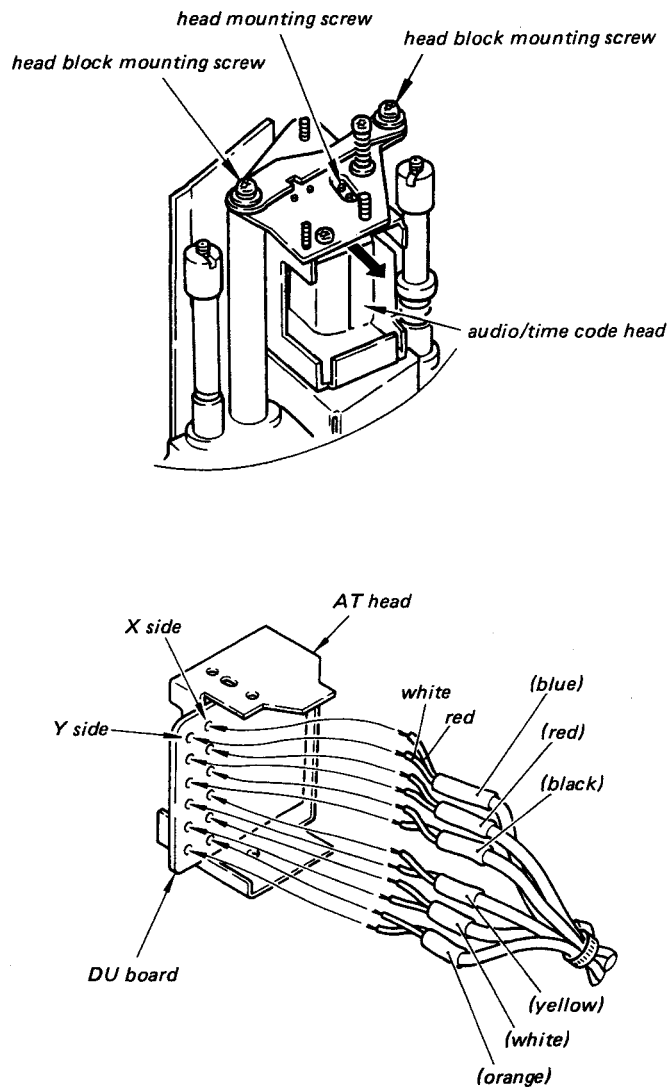
Replacement procedure:

(1) Remove the audio/time code head block.
(2) Remove the shield case (2).
(3) Unsolder the twelve leads of the head.
(4) Replace the audio/time code head to the new one and solder the leads that is unsoldered in step (3).

tube color	lead color	board
blue	white	Y
	red	X
red	white	Y
	red	X
black	white	Y
	red	X
yellow	white	Y
	red	X
white	white	Y
	red	X
orange	white	Y
	red	X

(Caution)
It is described in the order from the top.

(5) Install the shield case and install the head on the set while pressing in the direction of the arrow.
(6) Perform the adjustment as sec. 6-13.



6-8. REPLACEMENT OF TENSION REGULATOR

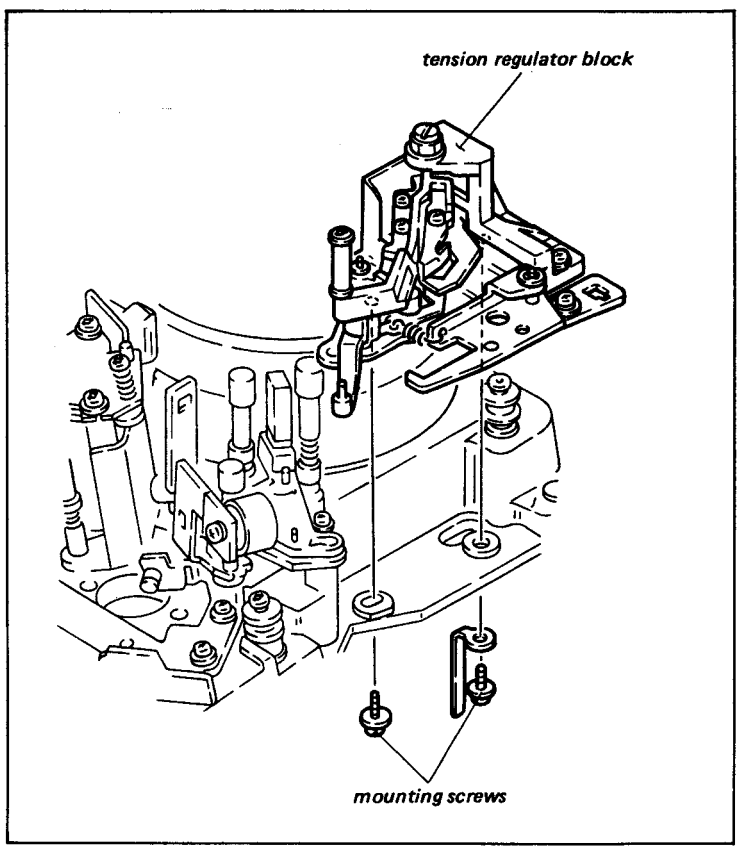
6-8-1. Replacement of Tenison Regulator Block

Replacement procedure:

(1) Remove the threading ring as sec. 6-12.

(2) Remove the two fixing screws on the back of the set and remove the tension regulator block.

(3) After replacement, perform the adjustment as sec. 6-13.



6-8-2. Replacement of Tension Regulator Arm

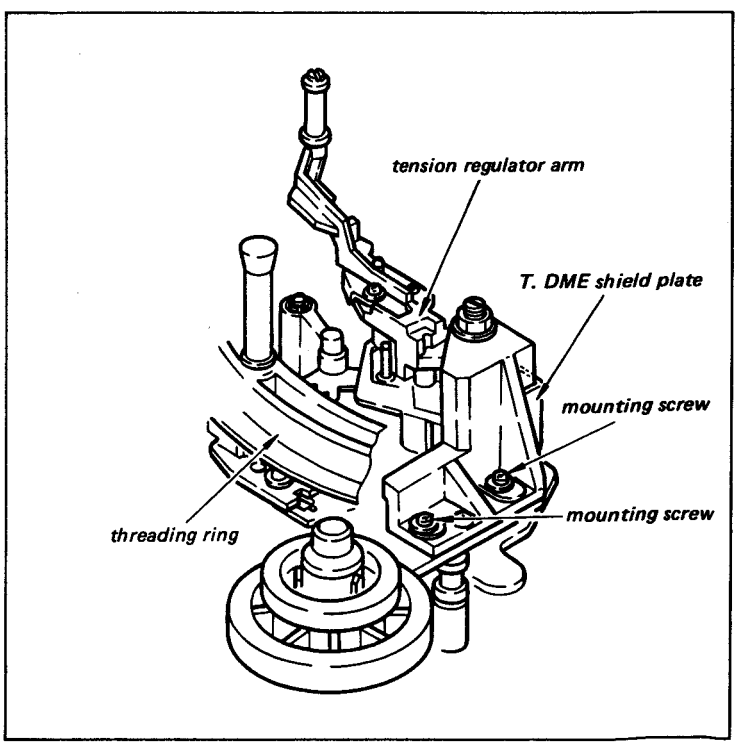
Replacement procedure:

(1) Put the machine into the unthreading end mode.

(2) Remove the T.DME shield plate.

(3) Remove the tension regulator arm.

(4) After replacement, perform the adjustment as sec. 6-13.



6-9. REPLACEMENT OF TENSION REGULATOR BLOCK. DME

Since the DME of the tension regulator block is pasted with a locking compound to the DME holder, replace the following two parts simultaneously.

DME (DM 208) : 8-745-208-00

DME holder : 3-680-830-01

Replacement procedure:

(1) Disconnect the connector on the TR-18 board on the back of the chassis.
Remove the tension regulator arm as sec. 6-8-2.

(2) Remove the TR-18 board from the tension regulator block.
Remove the DME from the TR-18 board.

(3) Cut the four leads of the DME 5 to 5.5mm long.

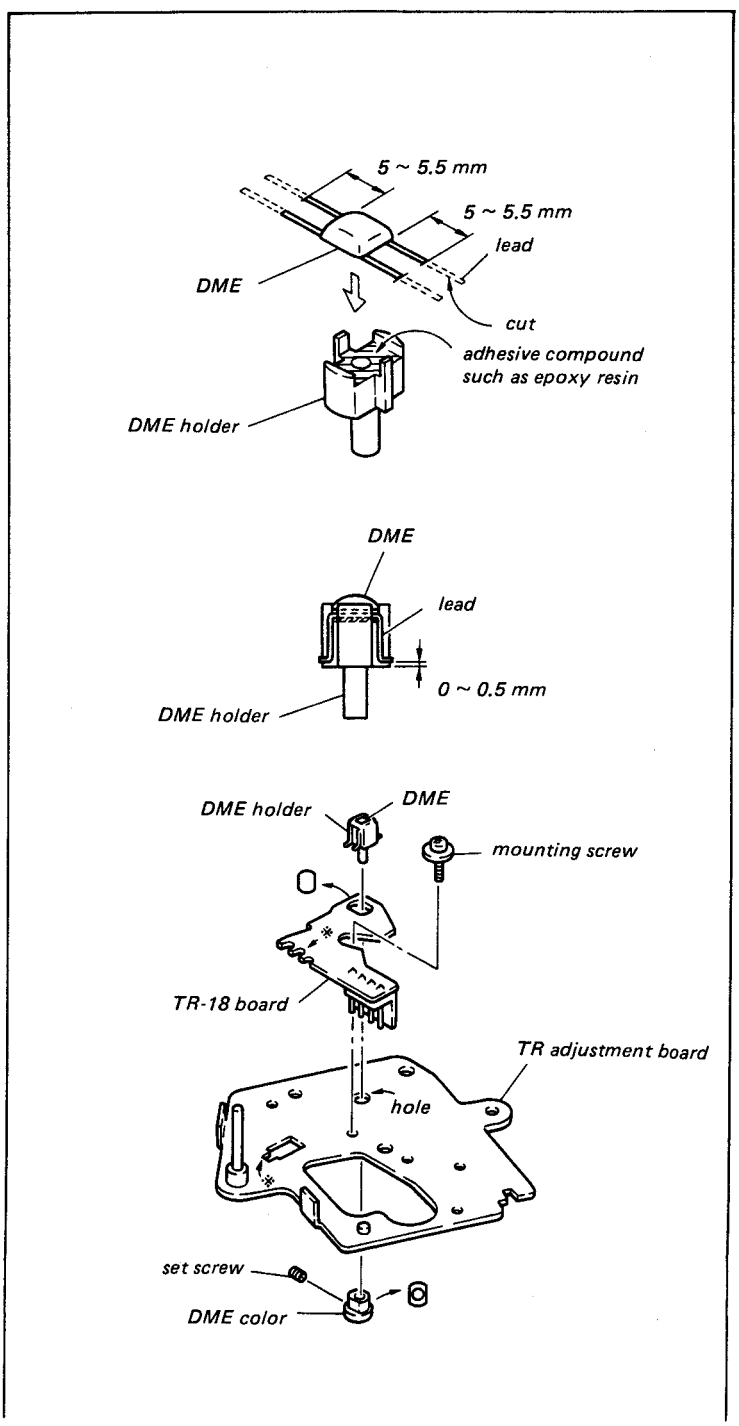
(4) Smear the adhesive compound such as epoxy resin to the DME holder as shown in figure.

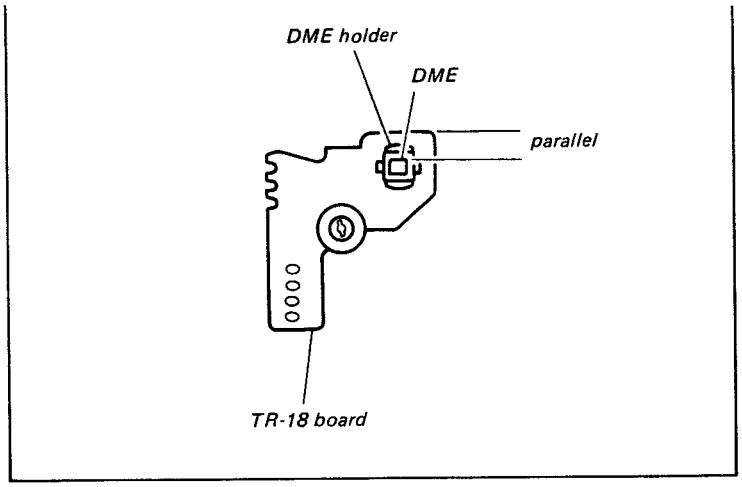
(5) Place the DME on the DME holder. Bend the end of lead as shown in figure, and solder it.

(6) Place the TR-18 board so that the * marked portion of TR adjusting plate is closest to the * marked portion of TR-18 board. Install the TR-18 board with DME color and mounting screw.

(7) Adjust the position of DME holder with plier so that the appearance of TR-18 board is parallel to the DME.

(8) After adjustment, perform the adjustment as sec.6-13.

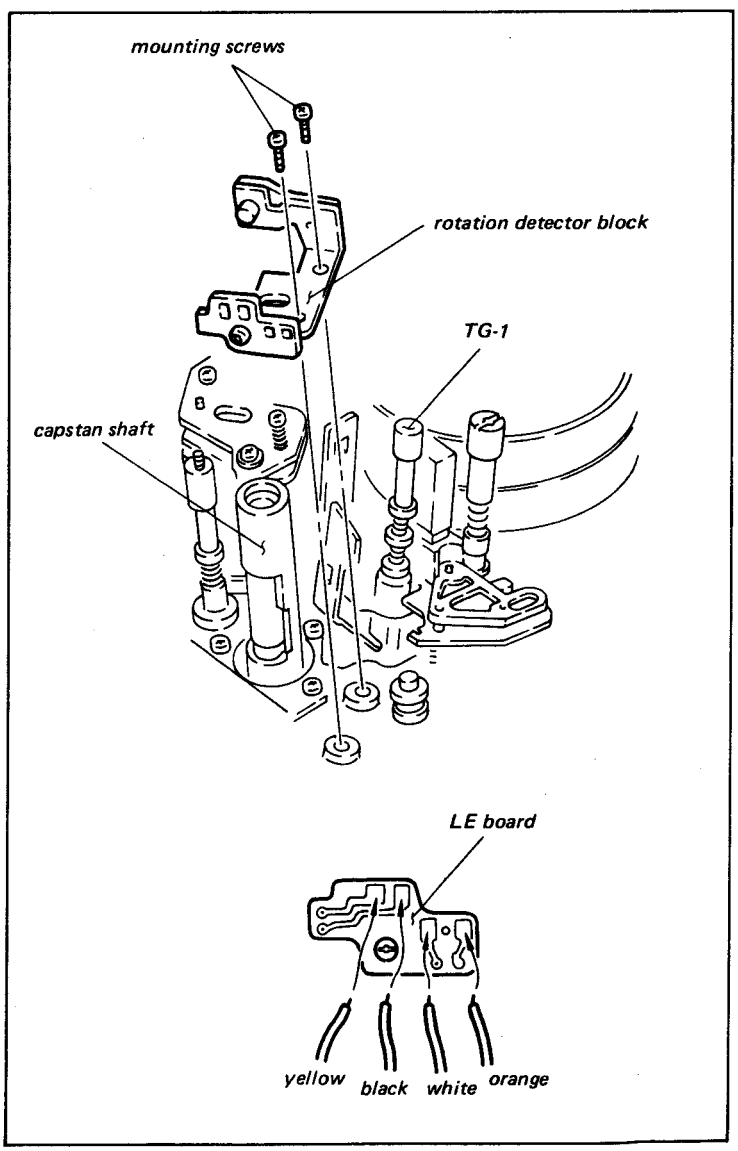




6-10. REPLACEMENT OF ROTATION DETECTOR BLOCK

Replacement procedure:

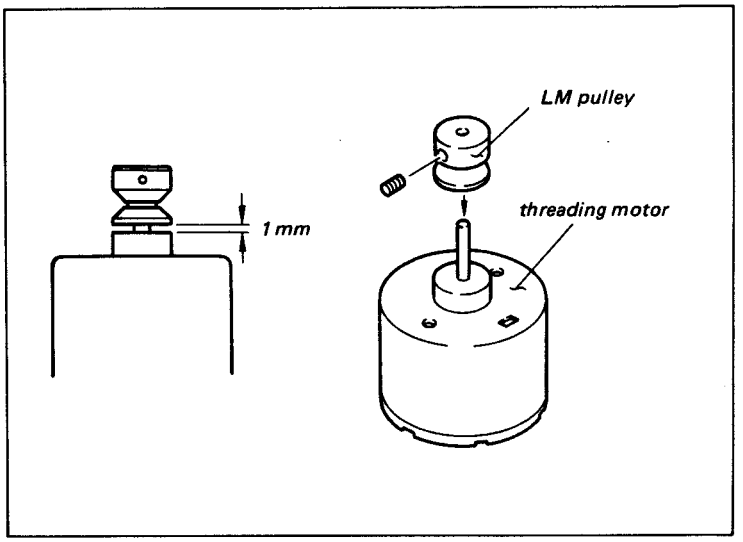
(1) Remove the threading ring as sec. 6-12.
(2) Remove the rotation detector block.
(3) Replace the defective parts.
(4) Solder the harness on the LE board as shown in figure.
(5) After replacement, perform the adjustment as sec. 6-13.



6-11. REPLACEMENT OF THREADING MOTOR

Replacement procedure:

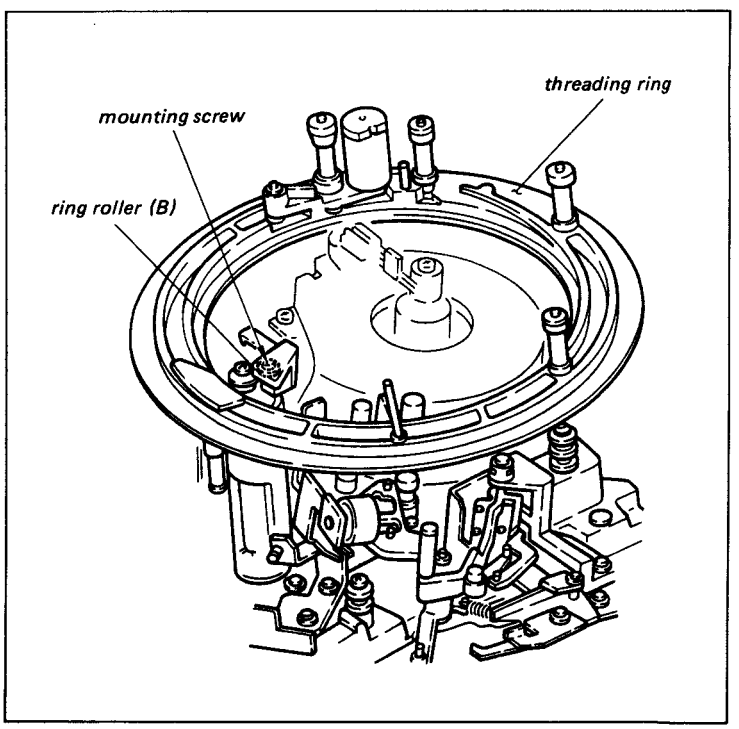
(1) Remove the connector, CN1/LM-4 board of the gear box block on the back of the set.
(2) Remove the gear box.
(3) Remove the LM pulley (2) from the threading motor and install it on the new threading motor so that the clearance between the pulley and the motor meets the required specification.
(4) After replacement, perform the adjustment as sec. 6-13.



6-12. REPLACEMENT OF THREADING RING

Replacement procedure:

(1) Turn the pulley of the gear box with hand till the threading ring places just before threading completion state.
(2) Loosen the mounting screw of the gear box and disengage the threading ring and the drive gear.
(3) Loosen the mounting screw of the tape beginning sensor and move the tape beginning sensor to the oposite direction of the threading ring.
(4) Loosen the mounting screw of the ring roller (B) ass'y and cancel the holding of the threading ring.
(5) Replace the threading ring.
(6) After replacement, perform the adjustment as sec. 6-13.



6-13. ADJUSTMENT ITEM TABLE MAIN PARTS REPLACEMENT

Replacement of Supply Reel Table

Reel Table Height Adjustment (7-1-2)——►Reel Table Rotation Detector Block Position Adjustment (7-1-3)——►S Soft Brake Torque Adjustment (8-1)——►FWD Back Tension Adjustment (8-4)——►Video Tracking Adjustment (9-2) (When the tracking adjustment is performed, adjust referring "Adjustment Steps of Tracking Adjustment", described on Sec.9 Adjustment Information.)——►Pinch Roller Pressure Timing Adjustment (9-14)

Replacement of Take-up Reel Table

Reel Table Height Adjustment (7-1-2)——►Reel Table Rotation Detector Block Position Adjustment (7-1-3)——►Tape Run Adjustment (9-1)

Replacement of Supply Reel Motor

Reel Motor Shaft Slantness Adjustment (7-1-1)——►Reel Table Height Adjustment (7-1-2)——►Main Brake Clearance Adjustment (7-2-1)——►Supply Soft Brake Adjustment (7-2-2)——►Reel Table Rotation Detector Block Position Adjustment (7-1-3)——►S Soft Brake Torque Adjustment (8-1)——►Reel Motor Torque Adjustment (8-2)——►Tension Sensor Impressed Voltage Adjustment (8-3)——►FWD Back Tension Adjustment (8-4)——►REV Tension Adjustment (8-5)——►Video Tracking Adjustment (9-2) (When the tracking adjustment is performed, adjust referring "Adjustment Steps of Tracking Adjustment", described on Sec.9 Adjustment Information.)——►Pinch Roller Pressure Timing Adjustment (9-14)——►Servo System Adjust ment

Replacement of Take-up Reel Motor

Reel Motor Shaft Slantness Adjustment (7-1-1)——►Reel Table Height Adjustment (7-1-2)——►Reel Table Rotoation Detector Block Position Adjustment (7-1-3) ——►Main Brake Clearance Adjustment (7-2-1)——►Take-up Pause Brake Adjustment (7-2-3)——►Reel Motor Torque Adjustment (8-2)——►Tension Sensor Impressed Voltage Adjustment (8-3)——►Tape Run Adjustment (9-1)——►Video Tracking Adjustment (9-2) (When the tracking adjustment is performed, adjust referring "Adjustment Steps of Tracking Adjustment", described on Sec.9 Adjustment Information.)——►Pinch Roller Pressure Timing Adjustment (9-14)——►Servo System Adjustment

Replacement of Capstan Motor

Pinch Press Mechanism Block Position Adjustment (7-4-2)——►Tape Run Adjustment (9-1)——►Video Tracking Adjustment (9-2) (When the tracking adjustment is performed, adjust referring "Adjustment Steps of Tracking Adjustment", described on Sec.9 Adjustment Information.)——►Pinch Roller Pressure Timing Adjustment (9-14) ——►Servo System Adjustment

Replacement of Threading Motor

Gear Block Position Adjustment (7-3-2)——►Servo System Adjustment

Replacement of Threading Ring

Replacment of Rotation Detector Block

Threading Ring Rotation Adjustment (7-3-1)——►Gear Box Position Adjustment (7-3-2)——►Ring Arm Position Adjustment (7-3-3)——►TE-2 Block Position Adjustment (7-3-4)——►TE-3 Block Position Adjustment (7-3-5)——►Tension Regulator Hook Arm Release Adjustment (7-5-2)——►Hook Adjustment Plate Position Adjustment (7-5-3)——►END Sensor Position Adjustment (7-7)——►Pinch Release Arm Position Adjustment (7-8)——►Tape Run Adjustment (9-1)——►Video Tracking Adjustment (9-2) (When the tracking adjustment is performed, adjust referring "Adjustment Steps of Tracking Adjustment", described on Sec.9 Adjustment Information.) ——►Pinch Roller Pressure Timing Adjustment (9-14)

Replacement of Tension Regulator

Replacement of Tension Regulator Arm

Replacement of Tension Regulator Arm. DME

All Adjustments described on Replacement of Threading Ring——►Tension Regulator System Adjustment (7-5)——►FWD Back Tension Adjustment (8-4)——►REV Tension adjustment (8-5)——►Video Tracking Adjustment (9-2) (When the tracking adjustment is performed, adjust referring "Adjustment Steps of Tracking Adjustment", described on Sec.9 Adjustment Information.)——►Pinch Roller Pressure Timing Adjustment (9-14)

Replacement of CTL Head

CTL Porality Check (9-4)——►CTL Head Azimuth/Zenith Adjustment (9-9)——►CTL Head Height Adjustment (9-10)——►Video Tracking Adjustment (9-2) (When the tracking adjustment is performed, adjust referring "Adjustment Steps of Tracking Adjustment", described on Sec.9 Adjustment Information.)——►CTL Head Position Adjustment (9-5)——►TC Head Position Adjustment (9-6)——►Pinch Roller Pressure Timing Adjustment (9-14)——►Servo System Adjustment

Replacement of Audio/TC Head

Audio/TC Head Zenith Adjustment (9-11)——►Audio Head Height Adjustment (9-12) ——►Audio Head Phase Adjustment (9-13)——►Video Tracking Adjustment (9-2) (When the tracking adjustment is performed, adjust referring "Adjustment Steps of Tracking Adjustment", described on Sec.9 Adjustment Information.)——►TC Head Position Adjustment (9-6)——►Audio System Adjustment

Replacement of Drum Assembly

Servo System Adjustment——►(When the tracking adjustment is performed, adjust referring "Adjustment Steps of Tracking Adjustment", described on Sec.9 Adjustment Information.)——►Slip-ring Brush Position Adjustment (9-15)——►Cleaning Roller Position Adjustment (7-9)——►Video System Adjustment

Replacement of Upper Drum Assembly

Upper Drum Eccentricity Adjustment (6-3)——►Video Tracking Adjustment (9-2) (When the tracking adjustment is performed, adjust referring "Adjustment Steps of Tracking Adjustment", described on Sec.9 Adjustment Information.)——►Video Head Dihedral Adjustment (9-3)——►CTL Head Position Adjustment (9-5)——►TC Head Position Adjustment (9-6)——►Y-Switching Position Adjustment(9-7)——►C-Switching Position Adjustment (9-8)——►Slip-ring Brush Position Adjustment (9-15)——►Cleaning Roller Position Adjustment (7-9)——►Pinch Roller Pressure Timing Adjustment (9-14)——►Video System adjustment

SECTION 7
LINK AND DRIVE SYSTEM ALIGNMENT

ALIGNMENT INFORMATION

MODE

. Unthreading end mode

It means EJECT completion mode.

The tension regulator arm and threading ring are put back at the cassette tape side completely.

. Threading mode

Press the PLAY button. Threading mode means that the threading ring is rotating in counterclockwise direction.

. Threading end mode

Press the PLAY button. The threading ring is rotating in counter-clockwise direction, and then the threading ring rotation is stopped. This state means the threading end mode.

. PLAY mode without cassette tape

Press the PLAY button. The threading ring is rotating in counter-clockwise direction, and the pinch roller is pressed against the capstan shaft after the threading ring rotation is stopped. This state means the PLAY mode without tape.

. STNADBY OFF mode without tape

(1) Put the machine into the PLAY mode without tape. (Refer to "PLAY mode without tape".)

(2) Press the STOP button. Then, the pinch roller is disengaged from the capstan shaft.

(3) Press the STANDBY button. Then, the machine put into the STANDBY OFF mode. (The drum rotation is stopped in the STANDBY OFF mode.)

. REV mode without tape

(1) Put the machine into the PLAY mode without tape. (Refer to "PLAY mode without tape".)

(2) Turn the SEARCH DIAL in counterclockwise direction. Then, the machine put into the REV mode.

7-1. REEL TABLE ADJUSTMENT

. Since the reel motor shaft slantness adjustment and the reel table height adjustment functions as the reference in the entire tape run system, it is requested that these adjustments should be attempted carefully, and deliberately.

7-1-1. Reel Motor Shaft Slantness Adjustment

. This adjustment is required only when the reel motor is replaced or removed.

Mode: Unthreading end

Tool: Cassette reference plate

Reel motor shaft slantness check jig

Check procedure:

(1) Remove the reel table from the reel motor shaft.

(2) Put the cassette reference plate at the position for the cassette.

(3) Check that the clearance between the check jig and the shaft meets the required specification, when the reel motor shaft slantness check jig is set on the reel motor shaft from two directions as shown in figure.

Adjustment procedure:

(1) Insert the reel motor spacer at the reel motor mounting screw as shown in figure.

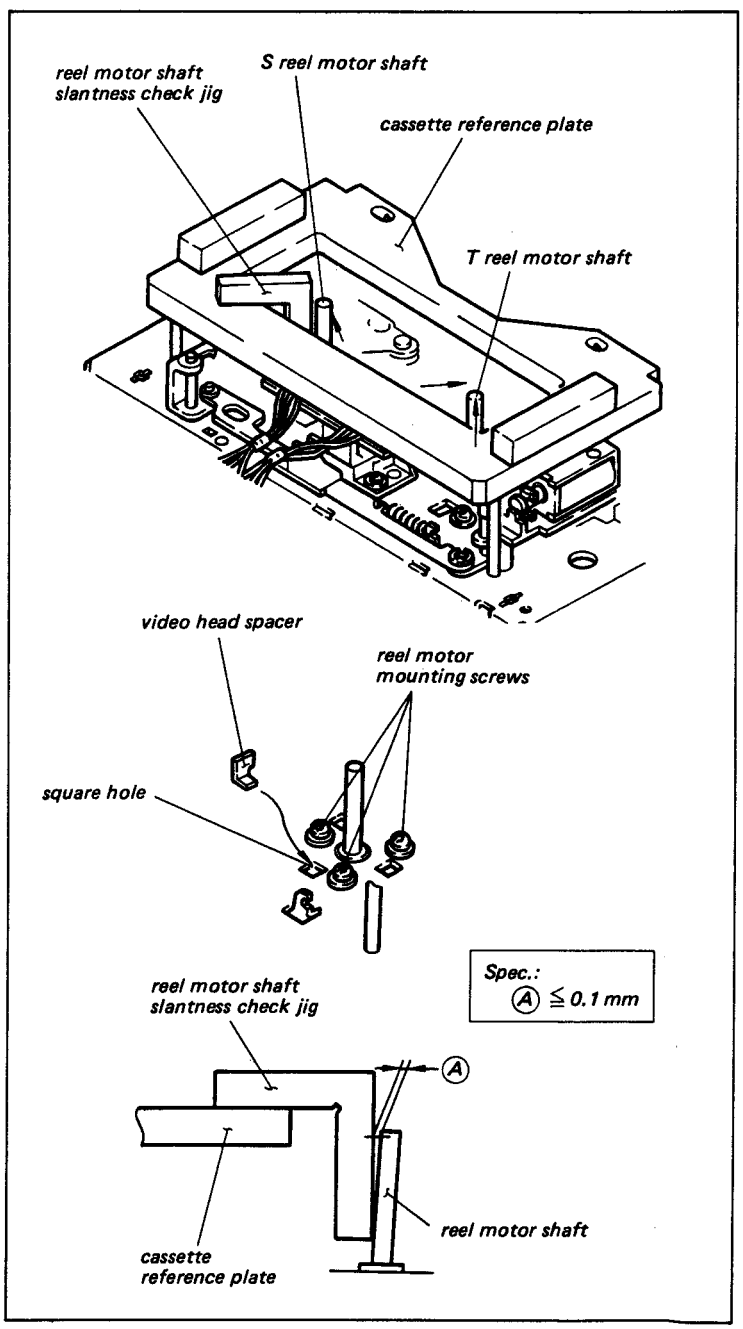
. video head spacer

0.01mm thick : 3-630-035-01

0.02mm thick : 3-630-035-11

0.03mm thick : 3-630-035-21

0.04mm thick : 3-630-035-31



7-1-2. Reel Table Height Adjustment

. This adjustment is required only when the reel motor and reel table replaced or removed.

Mode: Unthreading end

Tool: Cassette reference plate

Allen wrench (each edge has 1.5mm)

Adjustment procedure:

(1) Put the cassette reference plate at the position for the cassette.

(2) Move the gauge as shown in figure. Adjust height by the washer from under the reel table so that the * marked portion of the gauge can slide over the reel table, while the ** marked portion is blocked, and cannot slide over reel table.

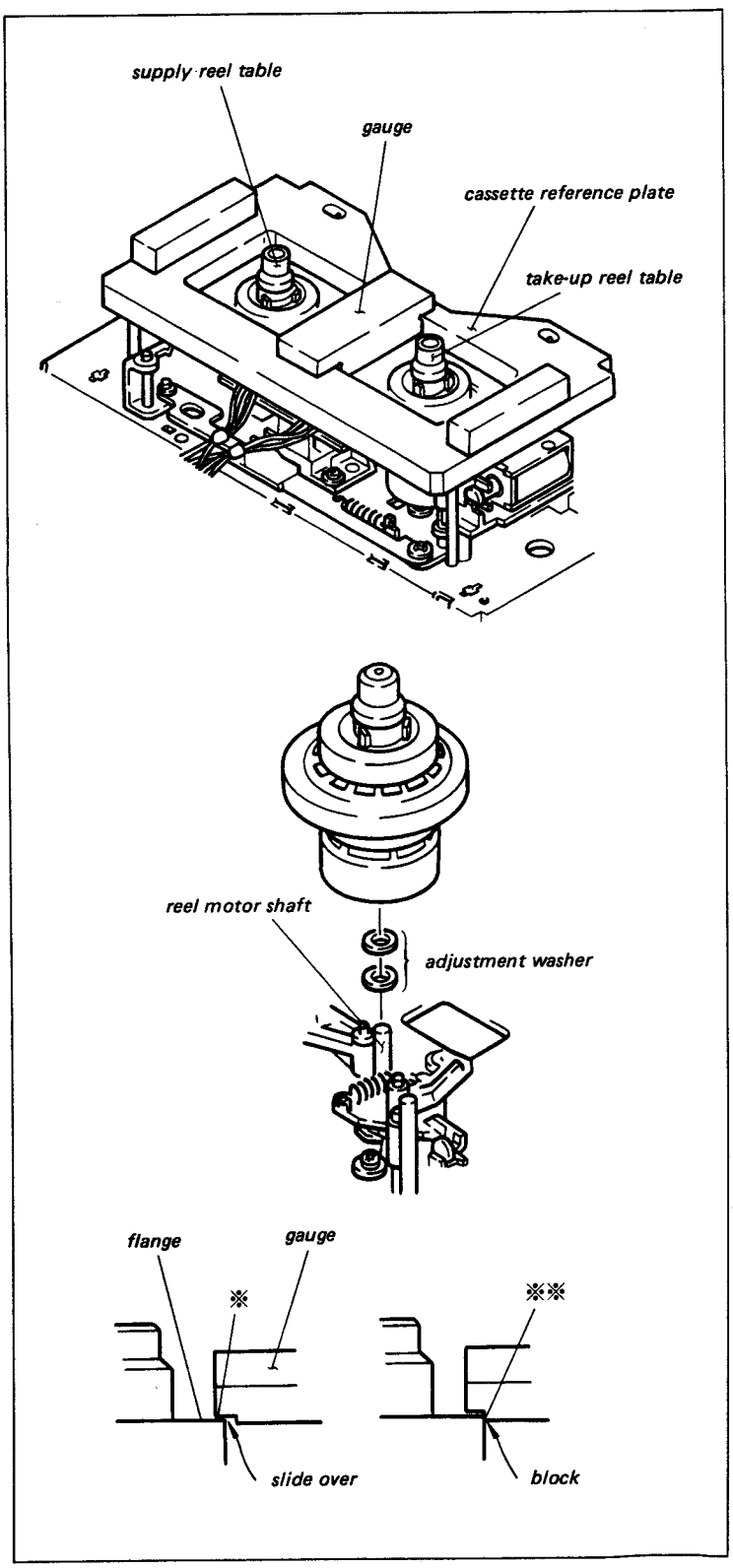
. **Adjustment washer**

Poly-slider-washer, 4mm dia.

0.13mm thick : 3-701-441-01

0.25mm thick : 3-701-441-11

0.5 mm thick : 3-701-441-21



7-1-3. Reel Table Rotation Detector Block Position Adjustment

Mode: Any mode

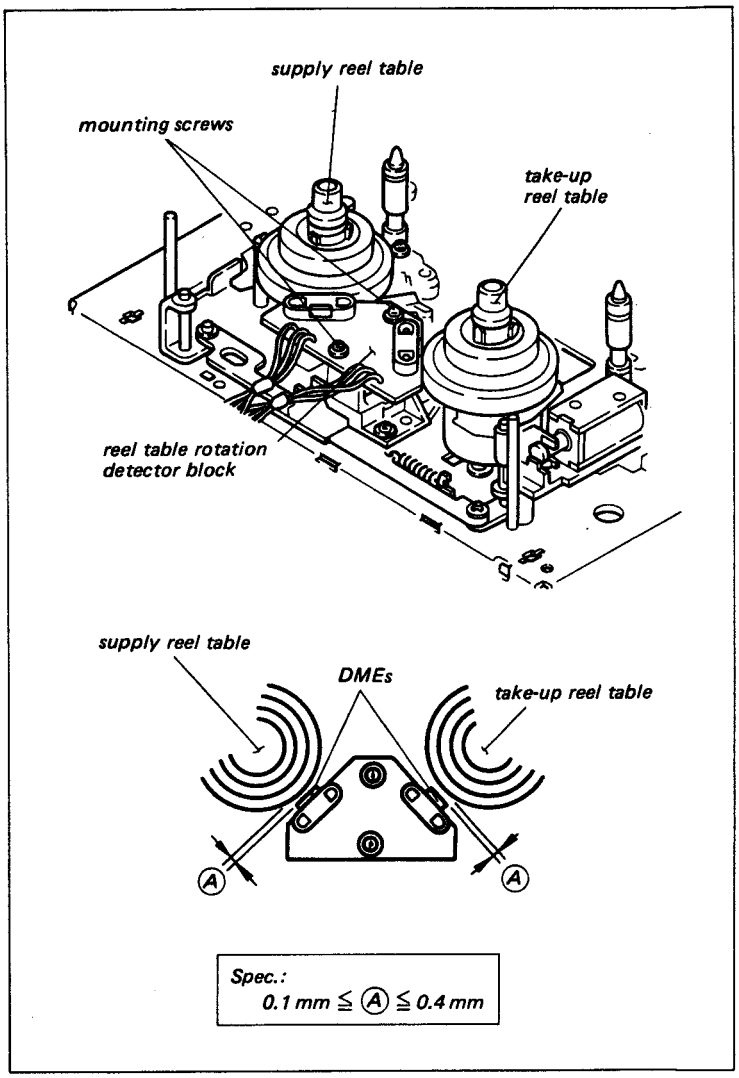
Tool: Thickness gauge

Check procedure:

(1) Check that the clearances between the supply reel table and the DME on the reel table rotation detector block, and between the take-up reel table and the DME meet the required specification.

Adjustment procedure:

(1) Adjust the position of the reel table rotation detector block to meet the required specification.



7-2. BRAKE SYSTEM ADJUSTMENT

7-2-1. Main Brake Clearance Adjustment

Mode: Unthreading end

Check procedure:

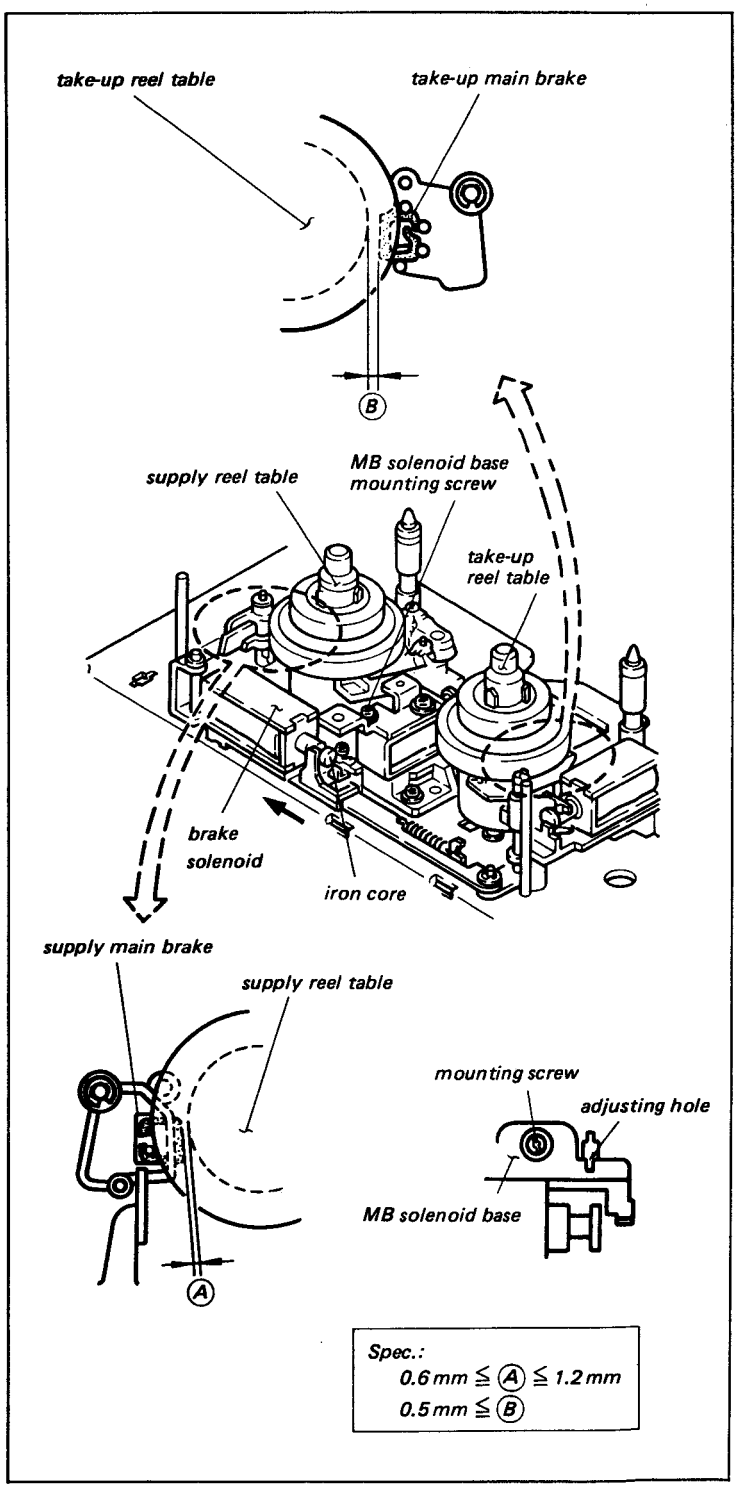
(1) Push the iron core of the brake solenoid with finger into the energized position in the direction of the arrow. Check that the clearances between the supply reel table and the supply main brake, and between the take-up reel table and the take-up main brake meet the required specification.

Adjustment procedure:

(1) Loosen the mounting screw of the MB solenoid base about 1/2 to 1 turn.

(2) Insert the flatblade screwdriver, 3mm dia. into the adjusting hole as shown in figure.

(3) Adjust the position of the MB solenoid base with screwdriver to meet the required specification, when the iron core of the brake solenoid is pushed in the direction of the arrow with finger.



7-2-2. Supply Soft Brake Adjustment

Mode: Unthreading end

Check procedure:

(1) Check that the clearance between the supply reel table and the supply soft brake exists. (Spec. (2))

(2) Push the iron core of the S brake solenoid with finger into the energized position in the direction of the arrow. Check that the clearance between the S brake arm and the S brake limitter meets the required specification. (Spec. (1))

Adjustment procedure:

(1) Remove the reel table rotation detector block.

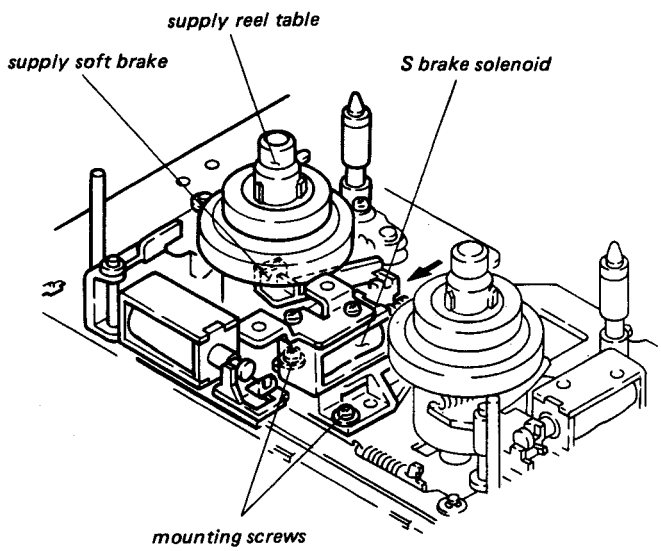
(2) Loosen the two mounting screws of the S brake soloenid block about 1/2 to 1 turn.

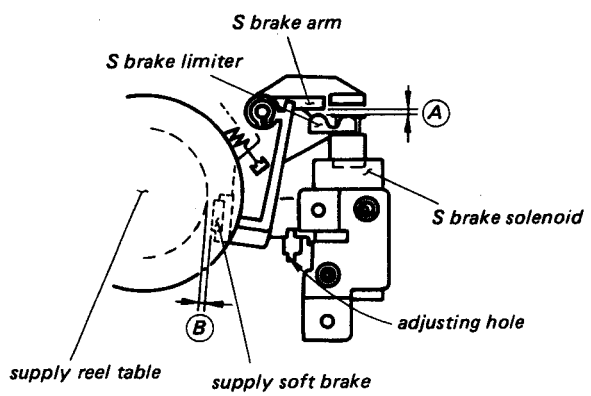
(3) Insert the flatblade screwdriver, 3mm dia. in the adjusting hole as shown in figure.

(4) Adjust the position of the S brake solenoid block with screwdriver to meet the required specification (1), when the iron core of the S brake solenoid is pushed with finger in the direction of the the arrow.

(5) After adjustment, take finger off and check that the required specification (2) is met.

(6) After adjustment, install the reel table rotation detector block and adjust it's position.





Spec. (1):
0.2 mm ≦ Ⓐ ≦ 0.4 mm
Spec. (2):
Ⓑ: there is clearances

7-2-3. Take-up Pause Brake Adjustment

Mode: Unthreading end

Check procedure:

(1) Check that the clearance between the take-up reel table and the T brake rubber roller exists. (Spec. (2))

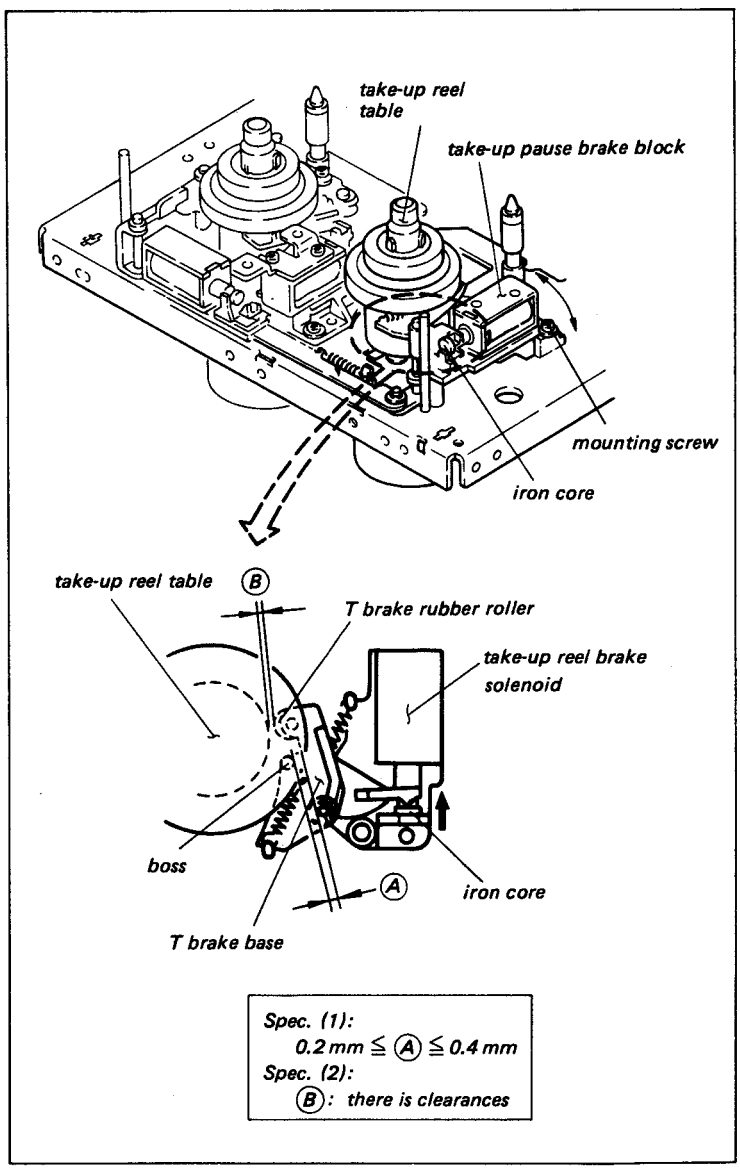
(2) Push the iron core of the take-up reel brake solenoid with finger into the energized position in the direction of the arrow.
Check that the clearance between the T brake base and the boss meets the required specification. (Spec. (1))

Adjustment procedure:

(1) Loosen the mounting screw of the take-up pause brake block about 1/2 to 1 turn.

(2) Move the take-up pause brake block in the direction of the arrow to meet the required specification (1), when the iron core of the take-up reel brake solenoid is pushed with finger in the direction of the arrow.

(3) After adjustment, take finger off the iron core and check that the required specification (2) is met.



7-3. THREADING RING SYSTEM ADJUSTMENT

7-3-1. Threading Ring Rotation Adjustment

. This adjustment is required only when the threading ring or ring roller (B) ass'y is replaced or removed.

Mode: Turn the power off while rotating the threading ring 180 degrees from unthreading end state.

Check procedure:

(1) Check that the horizontal play meets the required specification when the threading ring is pushed in the direction of the arrow with finger.

(2) Check that the rotation of the threading ring into the threading and unthreading modes are smooth.

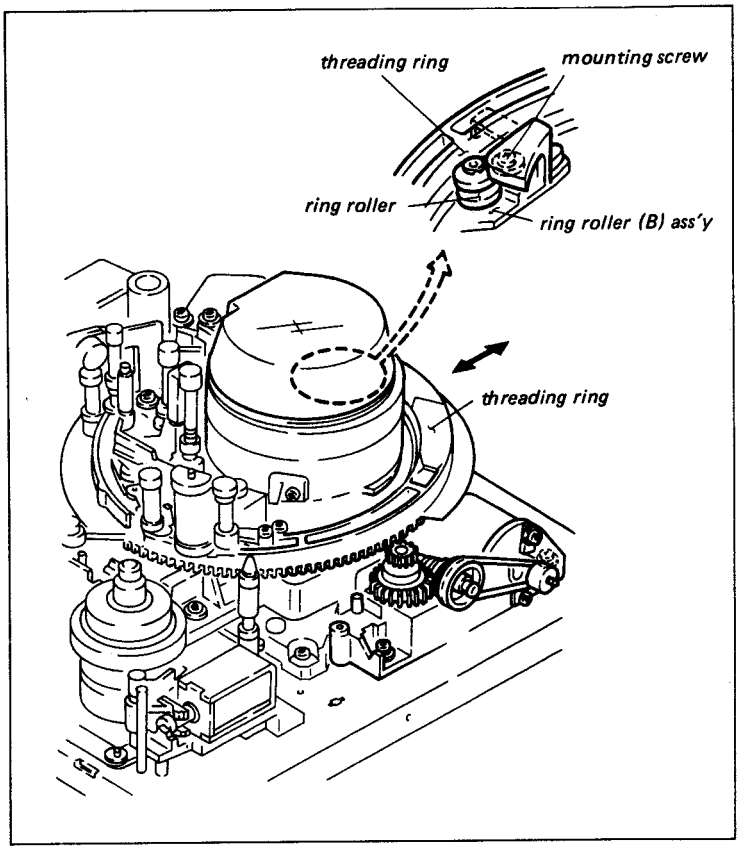
Adjustment procedure:

(1) Adjust the position of the ring roller (B) ass'y to meet the required specification.

Adjusting procedure;

.Insert a 0.3mm thick paper between the threading ring and the ring roller.

.Paper of this manual is about 0.1mm thick so that three fold becomes 0.3mm thick.



7-3-2. Gear Box Position Adjustment

. It is required that the sec. 7-3-1 threading ring rotation adjustment is checked to be correct or properly adjusted before initiating this adjustment.

Check procedure:

(1) Put the machine into the unthreading end mode.

(2) Turn the pulley of the gear box with finger about 90 degrees in the direction of the arrow.

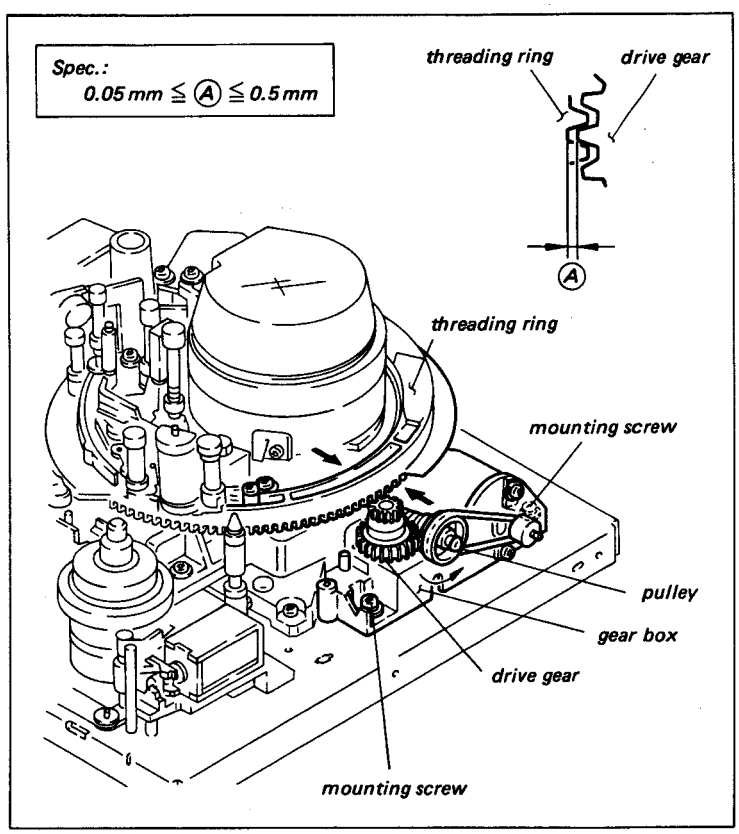
(3) While pushing the threading ring in the direction of the arrow (B) with finger, check that the clearance between the threading ring and the drive gear of the gear box meets the specification.

Adjustment procedure:

(1) Loosen the mounting screws of the gear box 1 to 2 turns.

(2) Press the threading ring in the direction of the arrow (A), while pushing the drive gear of the gear box against the threading ring lightly.

(3) Tighten the mounting screws of the gear box confirm as check procedure.



7-3-3. Ring Arm Position Adjsutment

Mode: Threading end

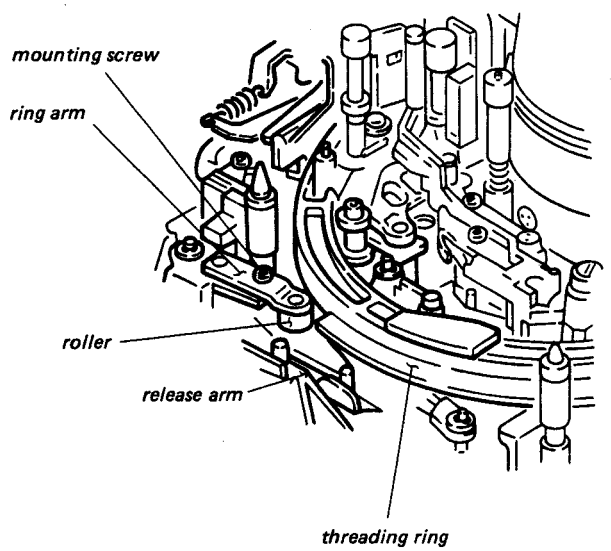
Check procedure:

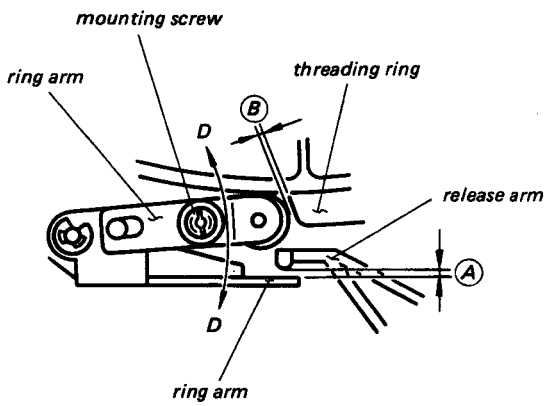
(1) Check that the clarance (A) between the release arm and the ring arm meets the specification (1).

(2) Check that the clearance (B) between the threading ring and the roller of the ring arm meets the specification (2).

Adjustment procedure:

(1) Move the ring arm position in the direction of the arrow (D) so that it meets the specifications (1) and (2).





Spec. (1):
0.1 mm ≦ Ⓐ ≦ 0.3 mm
Spec. (2):
Ⓑ ≦ 0.2 mm

7-3-4. TE-2 Block Position Adjustment

. The threading end detection is performed in the TE-2 block.

Mode: Threading end (POWER ON)

Tool: Circuit tester

Thickness gauge

Check procedure:

(1) Remove the DR-21P board. Extend it with the extension board. Connect the (+) lead of the circuit tester to the 27B/DR-21P board and the (-) lead to the E202/DR-21P board.

(2) Move the roller of the TE arm with finger in the direction of the arrow. Check that the circuit tester indicates about 1V when the roller is placed 3.5mm apart from the threading ring. (Spec (1))

(3) Check that the circuit tester indicates about 5V when the roller is placed 4.5mm apart from the threading ring. (Spec (2))

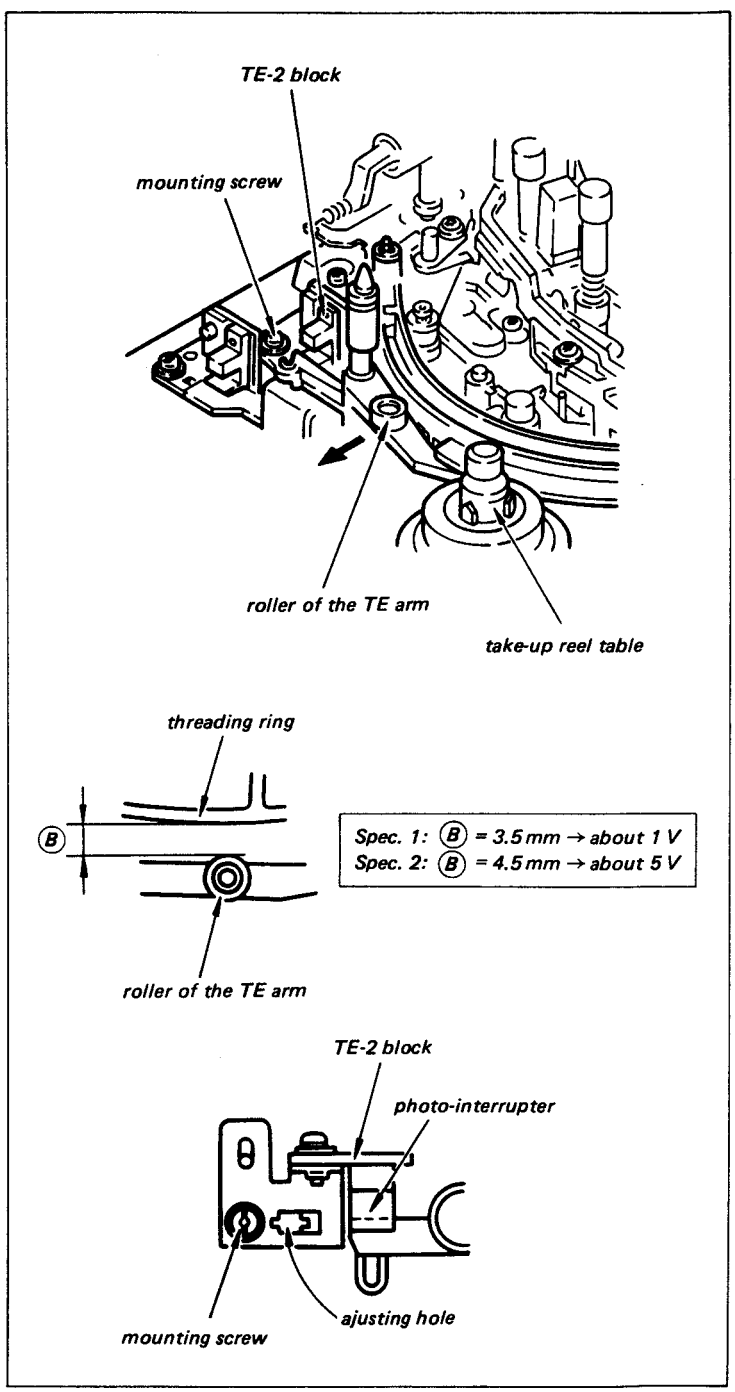
Adjustment procedure:

(1) Loosen the mounting screw of the TE-2 block about 1/2 to 1 turn.

(2) Insert a flatblade screwdriver, 3mm dia. into the adjusting hole and adjust the position of the TE-2 block so that it meets the specifications (1) and (2).

Adjusting procedure;

Adjust the TE-2 block so that the circuit tester indicates about 1V to 5V when the TE roller arm is placed 4mm apart from the threading ring.



7-3-5. TE-3 Block Position Adjustment

. The threading end and the unthreading end detections are performed in the TE-3 block.

Mode: Threading end (POWER ON)

Tool: Circuit tester

Thickness gauge

Check procedure:

(1) Remove the DR-21P board. Extend it with the extension board. Connect the (+) lead of the circuit tester to the 27A/DR-21P board and the (-) lead to the E202/DR-21P board.

(2) Move the roller of the ring arm with finger in the direction of the arrow. Check that the circuit tester indicates about 1V when the roller is placed 3.5mm apart from the threading ring. (Spec.(1))

(3) Check that the circuit tester indicates about 5V when the roller is placed 4.5mm apart from the threading ring. (Spec (2))

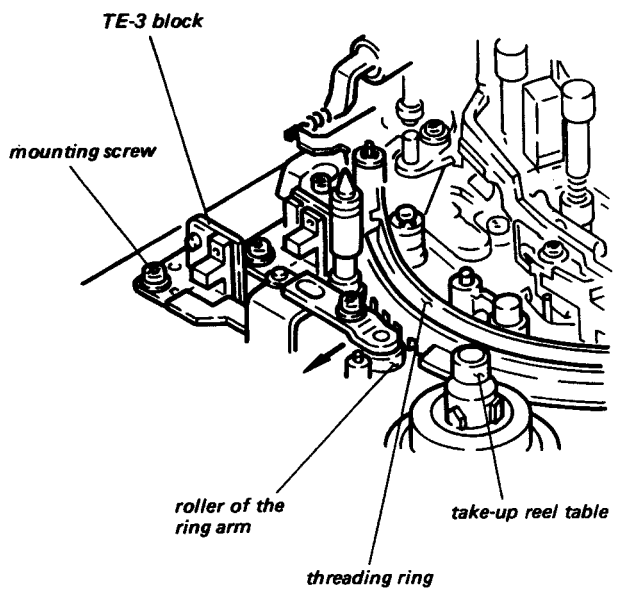
Adjustment procedure:

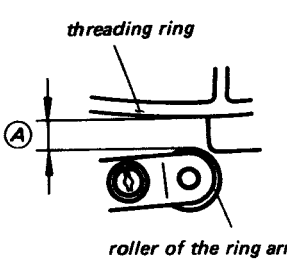
(1) Loosen the mounting screw of the TE-3 block about 1/2 to 1 turn.

(2) Insert a flatblade screwdriver, 3mm dia. into the adjusting hole and adjust the TE-3 block position to meet the specifications (1) and (2).

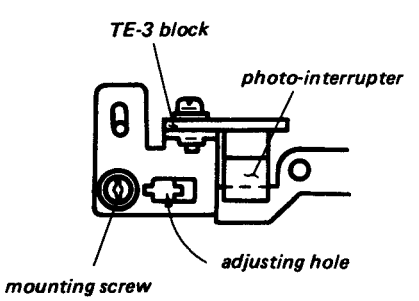
Adjusting procedure;

Adjust the TE-3 block so that the circuit tester indicates about 1V to 5V when the ring arm roller is placed 4mm apart from the threading ring.





Spec. 1: Ⓑ = 3.5 mm → about 1 V
Spec. 2: Ⓑ = 4.5 mm → about 5 V



7-4. PINCH PRESS MECHANISM BLOCK ADJUSTMENT

7-4-1. Pinch Roller Pressure Adjustment

Mode: Unthreading end

Tool: Tension scale (500g full scale)

Check procedure:

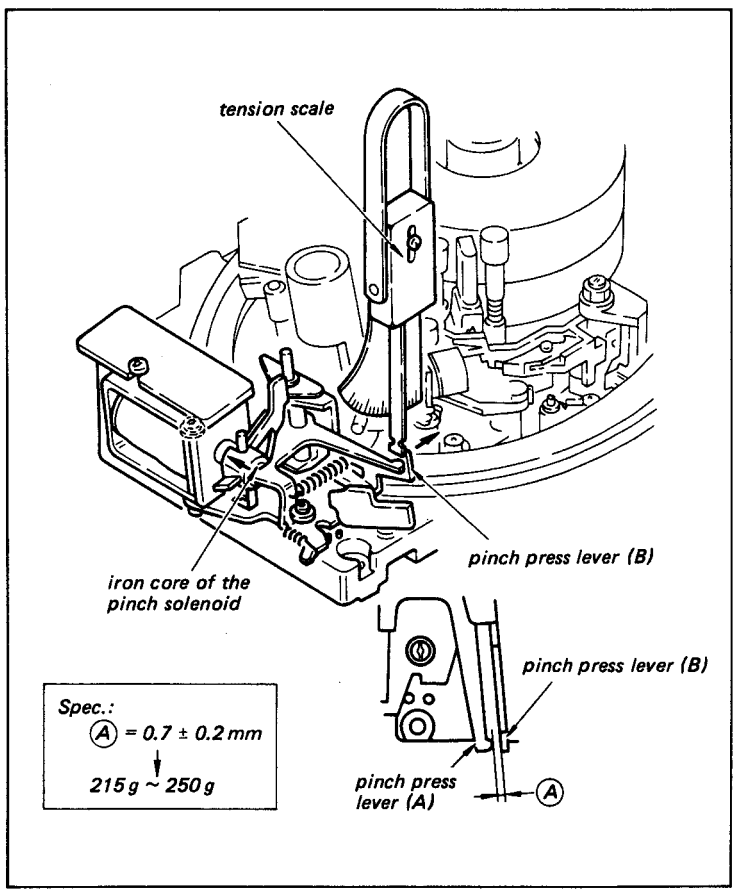
(1) Push the iron core of the pinch solenoid into the fully energized position in the direction of the arrow.

(2) Set the tension scale as shown in figure, and press the pinch press lever (B) with it in the direction of the arrow.

(3) When the clearance between the pinch press lever (A) and (B) is 0.7mm ± 0.2mm, check that the scale reading meets the required specification.

Adjustment procedure:

(1) Change the position of the spring to meet the required specification.



7-4-2. Pinch Press Mechanism Block Position Adjustment

Mode: PLAY mode without cassette tape

Check procedure:

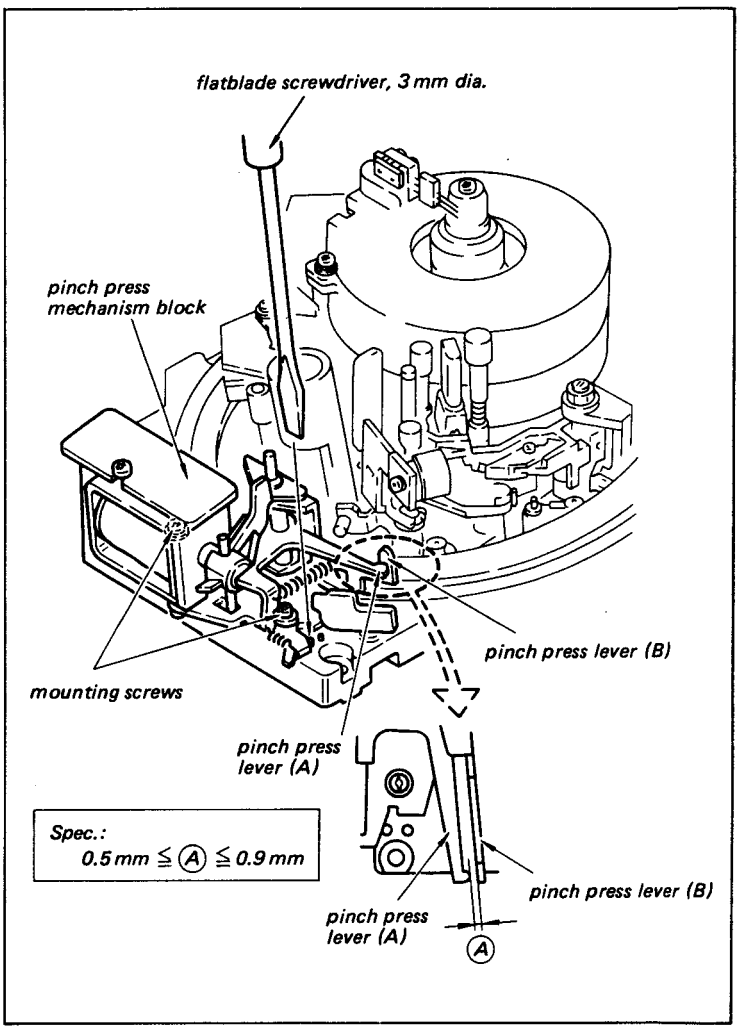
(1) Put the machine into the PLAY mode without cassette tape.

(2) Check that the clearance between the pinch press levers (A) and (B) meets the required specification.

Adjustment procedure:

(1) Loosen the mounting screws of the pinch press mechanism block about 1/2 to 1 turn.

(2) Insert a flatblade screwdriver, 3mm dia. into the notch of the pinch press mechanism, and adjust the pinch press mechanism position to meet the required specification.



7-5. TENSION REGULATOR SYSTEM ADJUSTMENT

7-5-1. Tension Regulator Arm Slantness Adjustment

. This adjustment is closely related with the video tracking adjustment.

. Perform the video tracking adjustment after this adjustment.

Mode: Threading end

Tool: Cassette reference plate
Tension regulator slantness check tool

Check procedure:

(1) Put the cassette reference plate in the cassette position.

(2) Place the tension regulator slantness check tool against the tension regulator roller.
Check that the slantness of the roller meets the required specification viewing from the direction of the arrows A and B as shown in figure.

Adjustment procedure:

. When the slantness is out of spec. viewing from the direction of the arrow A:

(1) Loosen the fixing screw.

(2) Adjust the slantness with the adjusting screws (A) and (B).

(3) Tighten the fixing screw and check again.

(4) After adjustment, perform the step (8).

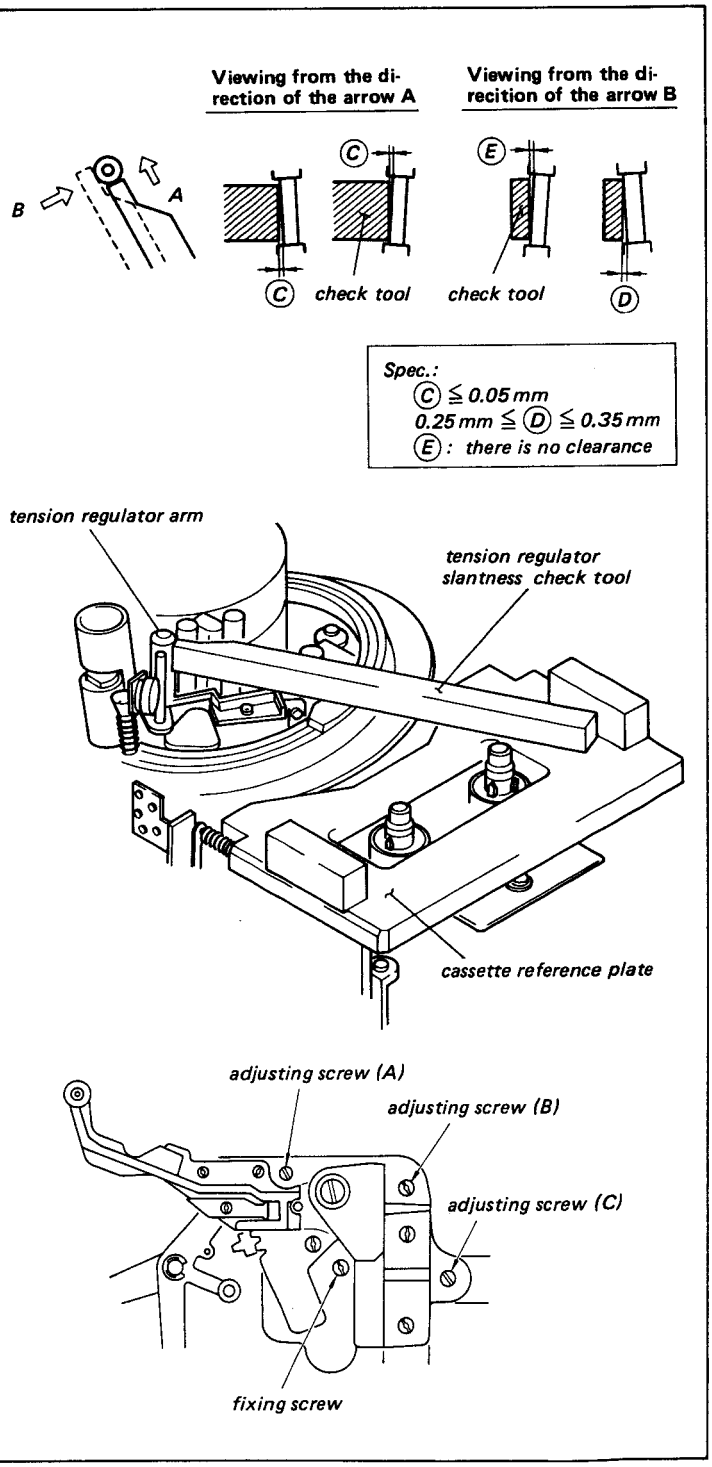
. When the slantness is out of spec. viewing from the direction of the arrow B.

(5) Loosen the fixing screw.

(6) Adjust the slantness with the adjusting screw (B).

(7) Tighten the fixing screw and check again.

(8) After adjustment, perform the following adjustments.
Sec.9-2 Video Tracking Adjustment
Sec.7-5-4 Tension Regulator Arm Position Adjustment



7-5-2. Tension Regulator Hook Arm Release Adjustment

Check procedure:

(1) Start the threading and turn the power off when the threading ring rotate 180 degrees from unthreading end state.

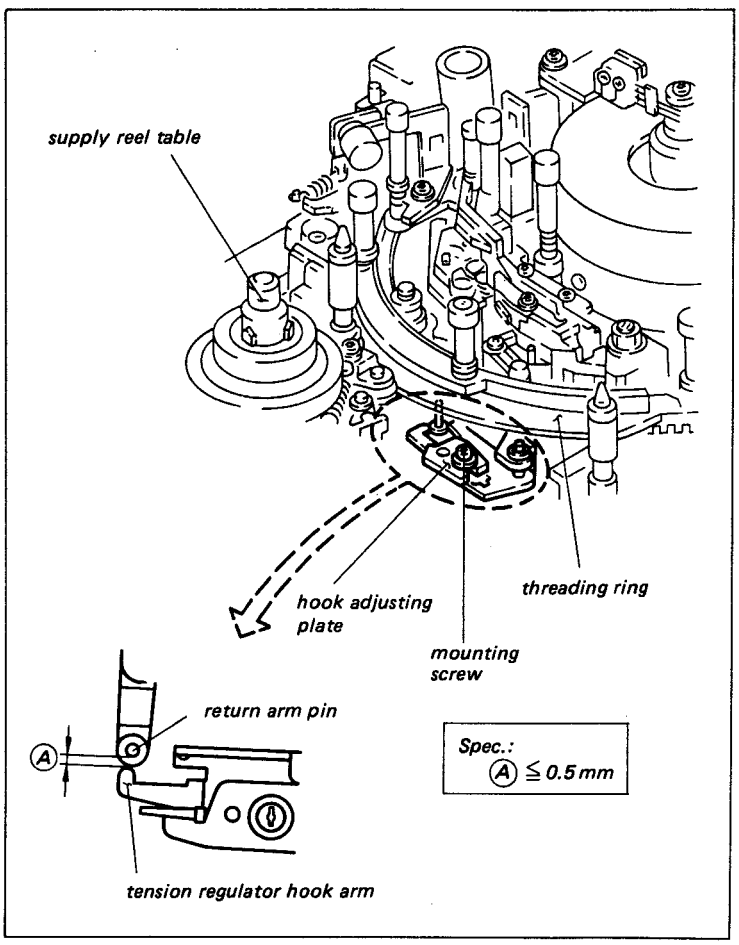
(2) Check that the clearance between the tension regulator hook arm and the return arm pin meets the required specification.

Adjustment procedure:

(1) Loosen the mounting screw of the hook adjusting plate about 1/2 to 1 turn.

(2) Insert a flatblade screwdriver 3mm dia. into the adjusting hole. Adjust the position of the hook adjusting plate so that it meets the required specification.

(3) After adjustment, perform sec. 7-5-3, Hook Adjusting Plate Position Adjustment.



7-5-3. Hook Adjusting Plate Position Adjustment

Mode: Treading end

Check procedure:

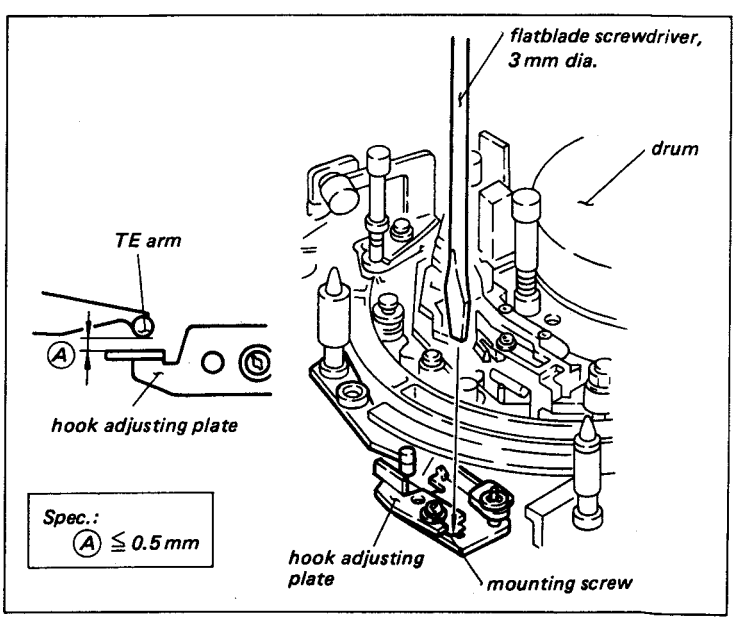
(1) Check that the clearance between the TE arm and the hook adjusting plate meets the required specification.

Adjustment procedure:

(1) Loosen the mounting screw of the hook adjusting plate about 1/2 to 1 turn.

(2) Insert a flatblade screwdriver 3mm dia. into the adjusting hole. Adjust the position of the hook adjusting plate so that it meets the required specification.

(3) After adjustment, perform sec. 7-5-2, Tension Regulator Hook Arm Release Adjustment.



7-5-4. Tension Regulator Arm Position Adjustment

. This adjustment is closely related with the video tracking adjustment and the tension regulator arm slantness adjustment.
. Perform this adjustment after initiating the video tracking adjustment and the tension regulator arm slantness adjustment.

Mode: STANDBY OFF (POWER ON state)

Tool: Digital multi meter
Tension scale (50g full scale)
Locally-Specially-Made-Tape
(prepare this tape as follows)

(1) Prepare a 12cm long video tape. (Worm out tape is acceptable)
(2) Make a loop on an end of the video tape. Attach adhesive tape on the other end. Make a hole on the adhesive tape.
(3) Make a loop of 30cm long string through the hole.

Preparation:

(1) Connect the digital multi meter to pin 16 of IC26/SV-55P board, and check the voltage.
(2) Connect the digital multi meter to TP512/SV-55P board.

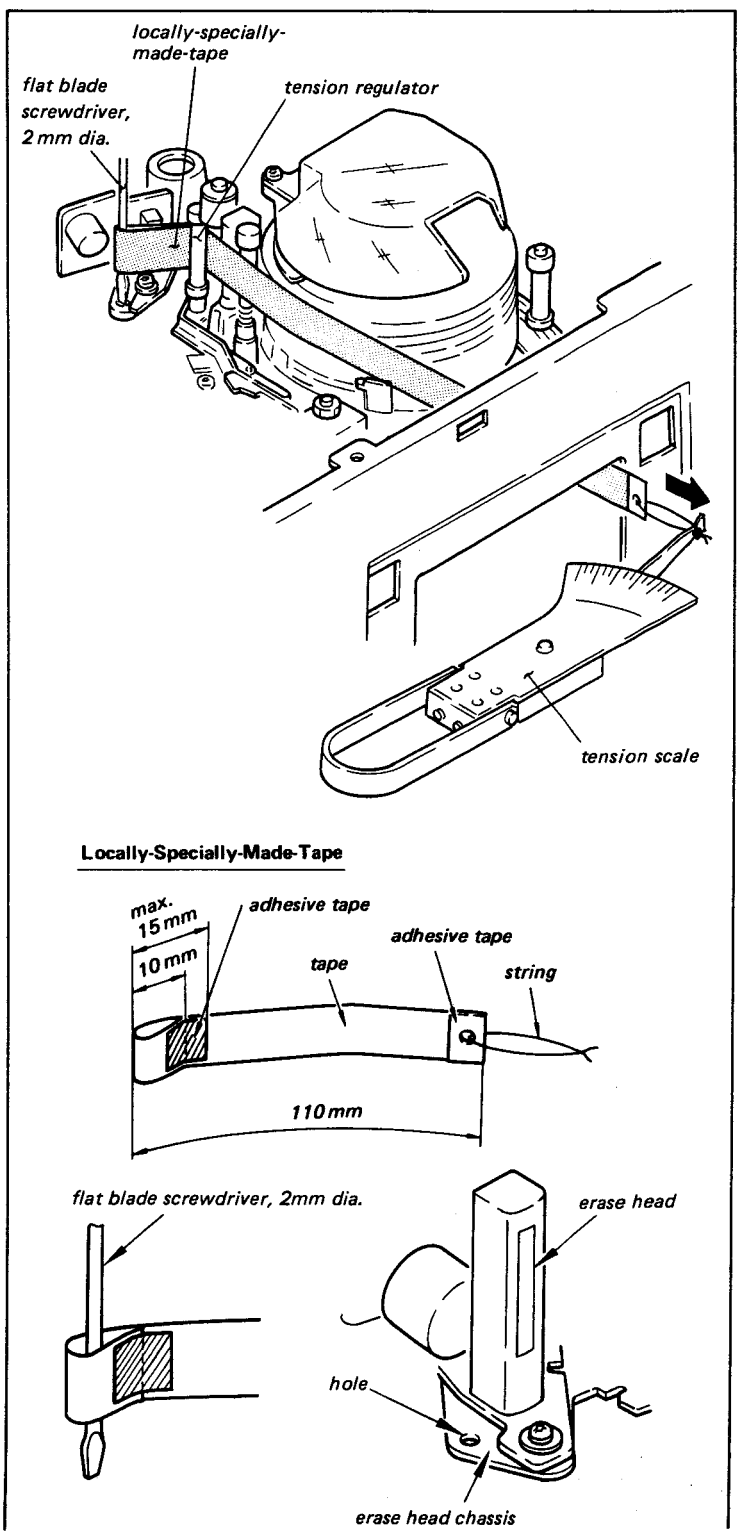
Check procedure:

(1) Thread the end of locally-specially-made-tape through the flatbrade screwdriver, 2mm dia. as shown in figure.
(2) Place the flatbrade screwdriver, 2mm dia. at the hole of erase head chassis as shown in figure.
(3) Hook a tension scale on an end of a string while keeping the screwdriver, and move the scale in the direction of the arrow till the scale indicate 45g.
(4) When the scale indicates 45g, check that the clearance between the tape guide (2) stopper and the tension regulator arm meets the specification (1), and the digital multi meter reading meets the specification (2) simultaneously.

Adjustment procedure:

. When the clearance is out of spec. (1).

(1) Loosen the mounting screw of the tension regulator hook ass'y about 1/2 to 1 turn.



(2) Insert a flatblade screwdriver 3mm dia. into the adjusting hole and adjust the tension regulator hook ass'y position so that it meets the specification (1).

(3) After tighten the mounting screw, check to meet the specification (1) again.

(4) Check to meet the specification (2).

. When the digital multi meter reading is out of spec. (2).

(5) Loosen the mounting screw of TR board.

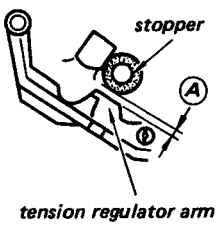
(6) Adjust the position of the TR board so that it meets the specification (2).

(7) Tighten the mounting screw and check to meet the specification (2) again.

(8) After adjustment, perform the following adjustment.

Sec. 8-4, FWD Back Tension Adjustment

Sec. 8-5, REV Tension Adjustment



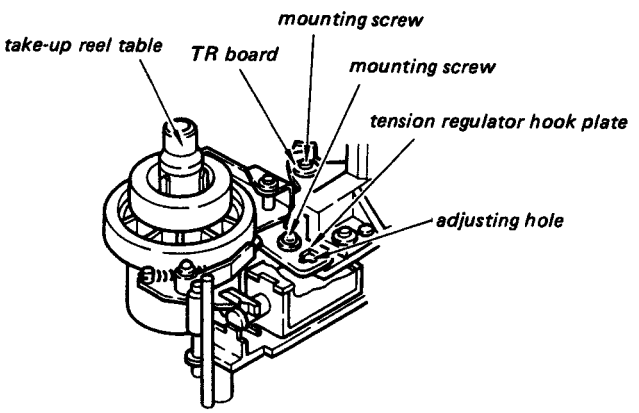
Spec. 1:

0.7 mm ≦ Ⓐ ≦ 1 mm

Spec. 2:

½B − 0.05 Volt ≦ C ≦ ½B + 0.05 Volt

• B is a voltage between IC26, pin 16/ SV-55 board and TPE.



7-6. CASSETTE UP COMPARTMENT ADJUSTMENT

7-6-1. Lid Opener Lever Position Adjustment

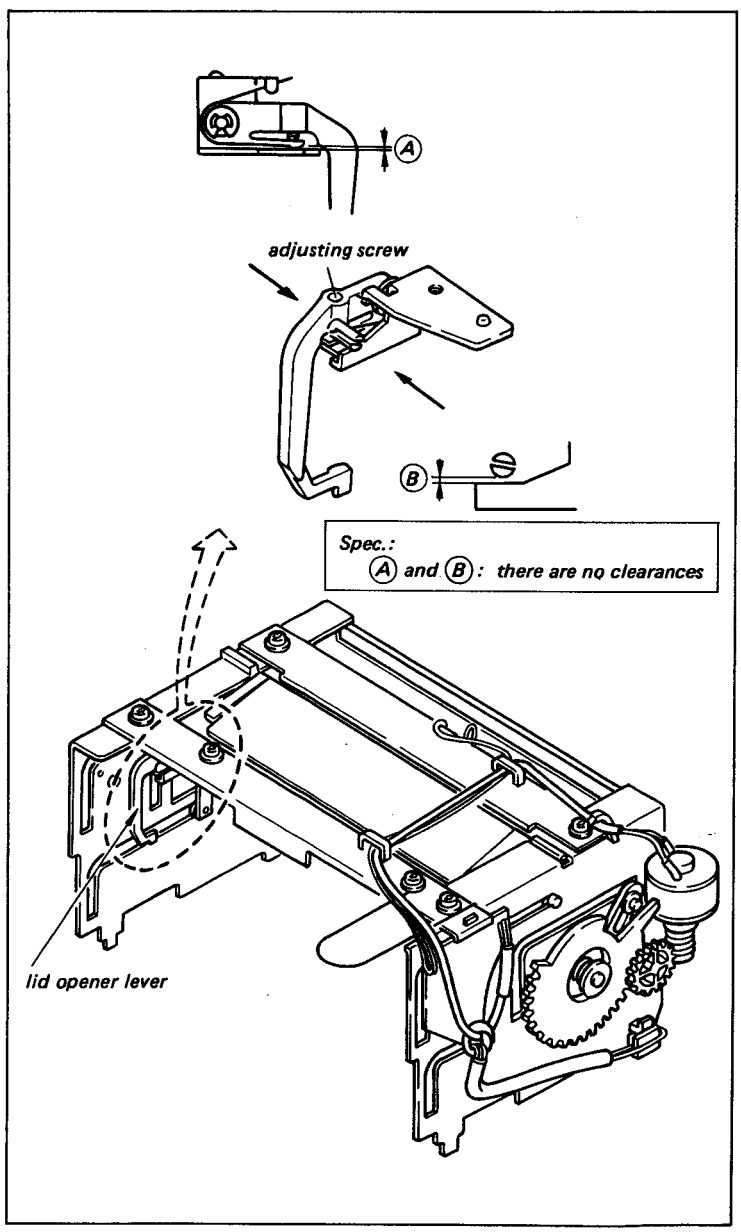
. This adjustment is required only when the lid opener lever is replaced or removed. Remove the cassette up compartment from the machine in this adjustment.

Check procedure:

(1) Check that there is no clearance between the hook and the lid opener lever (black colored plastic) on the two points as shown in figure.

Adjustment procedure:

(1) Adjust to meet the required specification with adjusting screw.



7-6-2. Lid Opener Lever Block Position Adjustment

. This adjustment is required only when the lid opener lever block is removed from the cassette up compartment. Remove the cassette up compartment from the machine in this adjustment.

Tool: Slide vernier caliper or equivalent

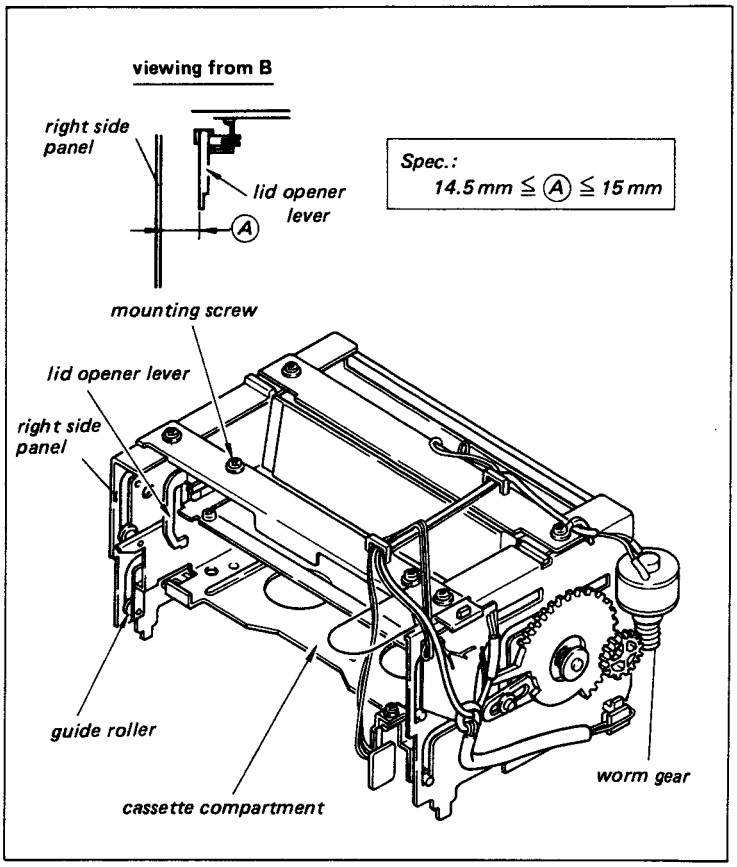
Check procedure:

(1) Place the cassette up compartment in the up state.

(2) Check that the positional relationship between the lid opener lever and the right side panel meets the required specification.

Adjustment procedure:

(1) Adjust the position of the lid opener lever block so that it meets the required specification.



7-6-3. Motor Block Position Adjustment

. Remove the cassette up compartment from the machine in this adjustment.

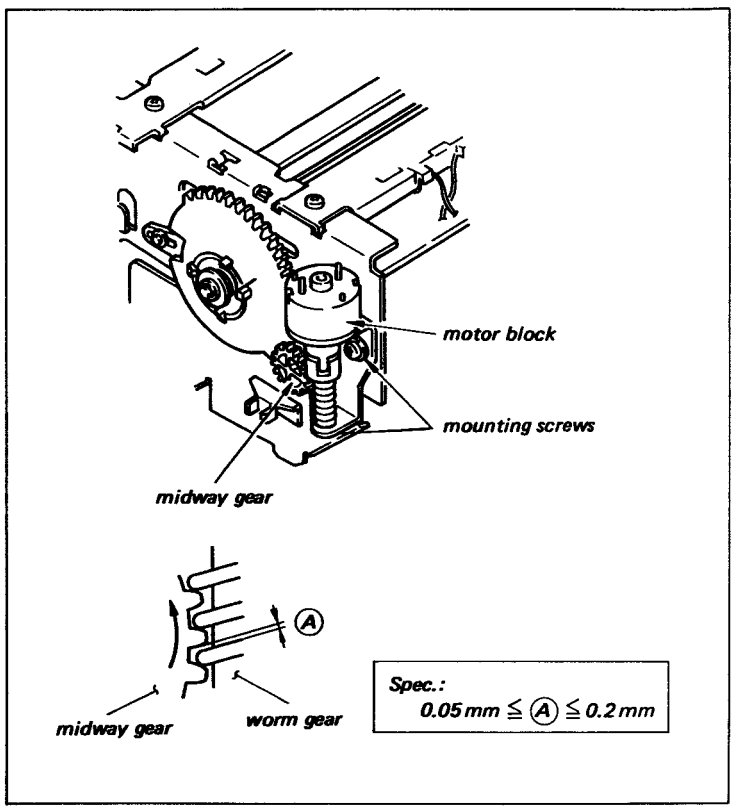
Check procedure:

(1) When the midway gear is turned in the direction of the arrow, check that the clearance between the midway gear and the worm gear meets the required specification.

Adjustment procedure:

(1) Loosen the mounting screws about 1 turn.

(2) Adjust the position of the motor block to meet the required specification.



7-6-4. Cassette in Switch Position Adjustment

. Remove the cassette up compartment from the machine in this adjustment.

Tool: Slide vernier caliper or equivalent
Circuit tester

Prepatration:

(1) Remove the DR-21P board.
Extend it with the extension board.

(2) Connect the circuit tester to the connector 18A/DR-21P board.

(3) Unsolder the jumper lead of the motor, A terminal from the CL-7 board.

(4) Connect the following terminals with jumper leads between CN1 on CL-7 board and harness connector for cassette up compartment.

harness connector		CN1/CL-7
5pin	◄——►	5pin
6pin	◄——►	6pin
7pin	◄——►	7pin
8pin	◄——►	8pin

(5) Turn the power on.

Check procedure:

(1) Turn the worm gear of the motor block in the cassette up state.

(2) Move the slider with finger into direction of the arrow as shown in figure. Check that the circuit tester indicates less than 1V to more than 4V when the clearance between the slider and the cassette compartment is 3.5mm to 4.5mm.

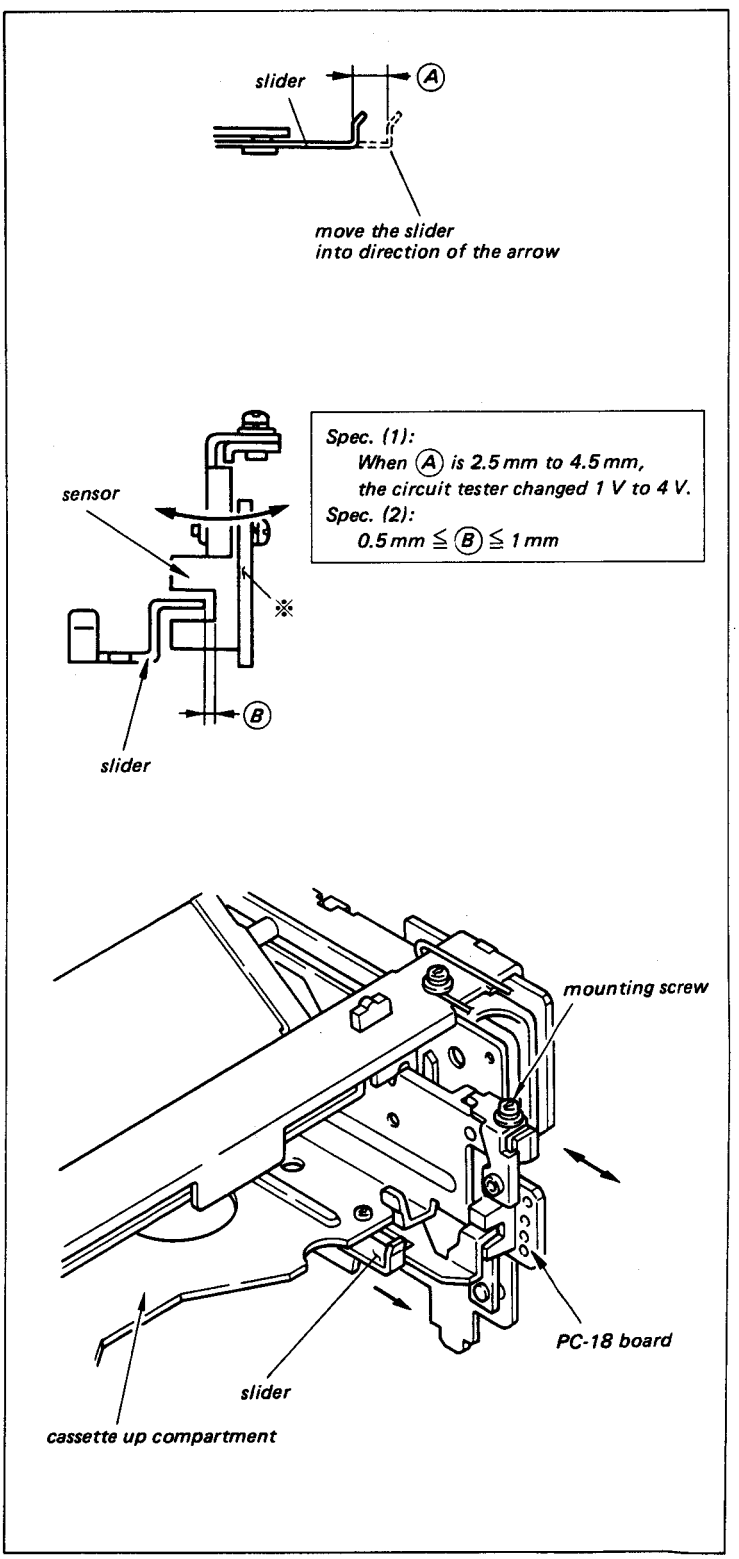
(3) Check that the clearance between the slider and the sensor meets the required specification. (Spec.(2))

(4) When the specifications (1) and (2) are met, perform the adjustment procedure step (2).

Adjustment procedure:

(1) Adjust the position of the cassette in switch block (PC-18 board) to meets the specifications (1) and (2).

(2) After adjustment, solder the jumper lead of the motor to the A terminal, CL-7 board.



7-6-5. Cassette Down Switch Position Adjustment

. Remove the cassette up compartment from the machine in this adjustment.

Tool: Slide vernier caliper or equivalent
Circuit tester

Preparation:

(1) Remove the DR-21P board.
Extend it with the extension board.

(2) Connect the circuit tester to the connector 17B/DR-21P board.

(3) Unsolder the jumper lead of the motor, the A terminal from the CL-7 board.

(4) Connect the following terminals with jumper leads between CN1 on CL-7 board and harness connector for cassette up compartment.

harness connectror		CN1/CL-7
5pin	◄——►	5pin
6pin	◄——►	6pin
7pin	◄——►	7pin
8pin	◄——►	8pin

(5) Turn the power on.

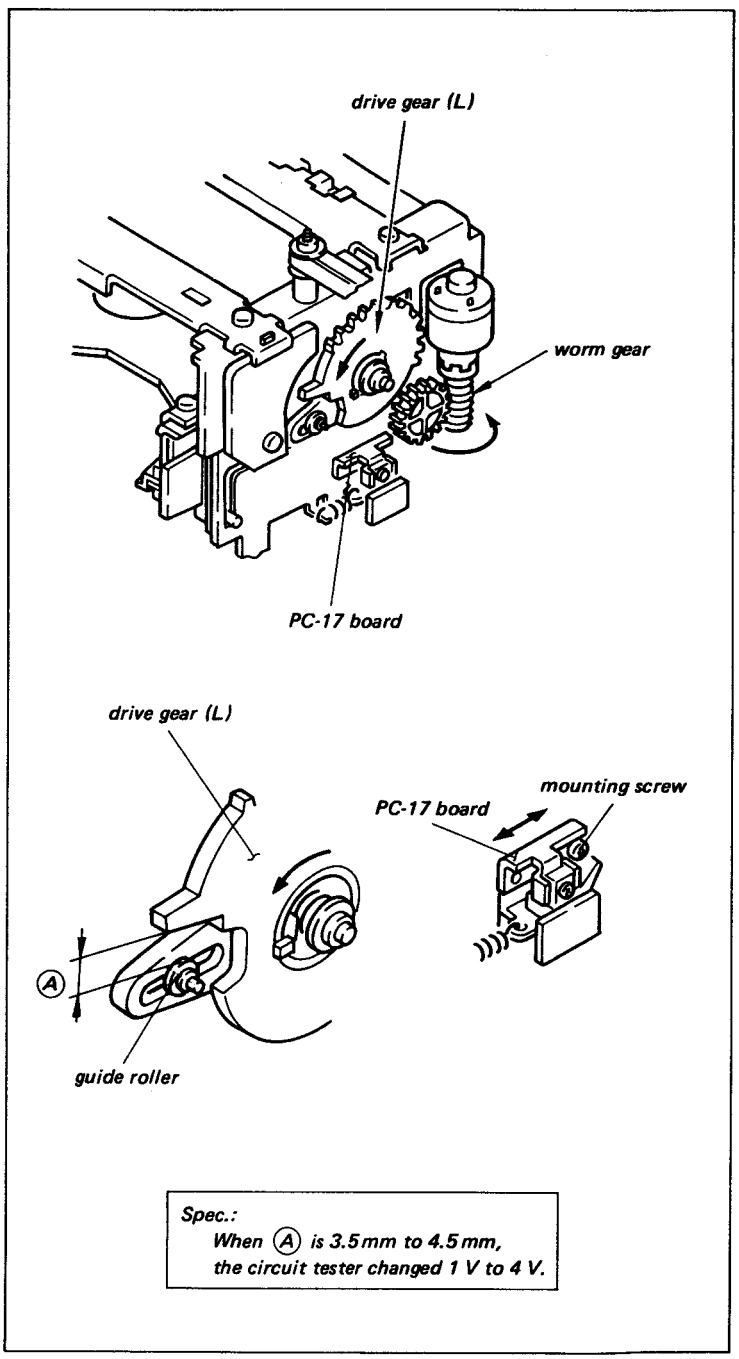
Check procedure:

(1) Turn the worm gear of the motor block in the cassette down state.

(2) Move the drive gear (L) with finger in the direction of the arrow as shown in figure.
Check that the circuit tester indicates less than 1V to more than 4V when the clearance as shown in figure is 3.5mm to 4.5mm.

Adjustment procedure:

(1) Move the cassette down switch block (PC-17 board) in the direction of the arrow.



Spec.:
When Ⓐ is 3.5mm to 4.5mm, the circuit tester changed 1 V to 4 V.

7-7. END SENSOR POSITION ADJUSTMENT

Mode: PLAY

Check procedure:

(1) Insert a cassette tape and put the machine into the PLAY mode.

(2) Check that the clearance between the tape end sensor and the tape meets the required specification.

(3) Check that the clearance between the tape beginning sensor and the tape meets the required specification as shown in figure.

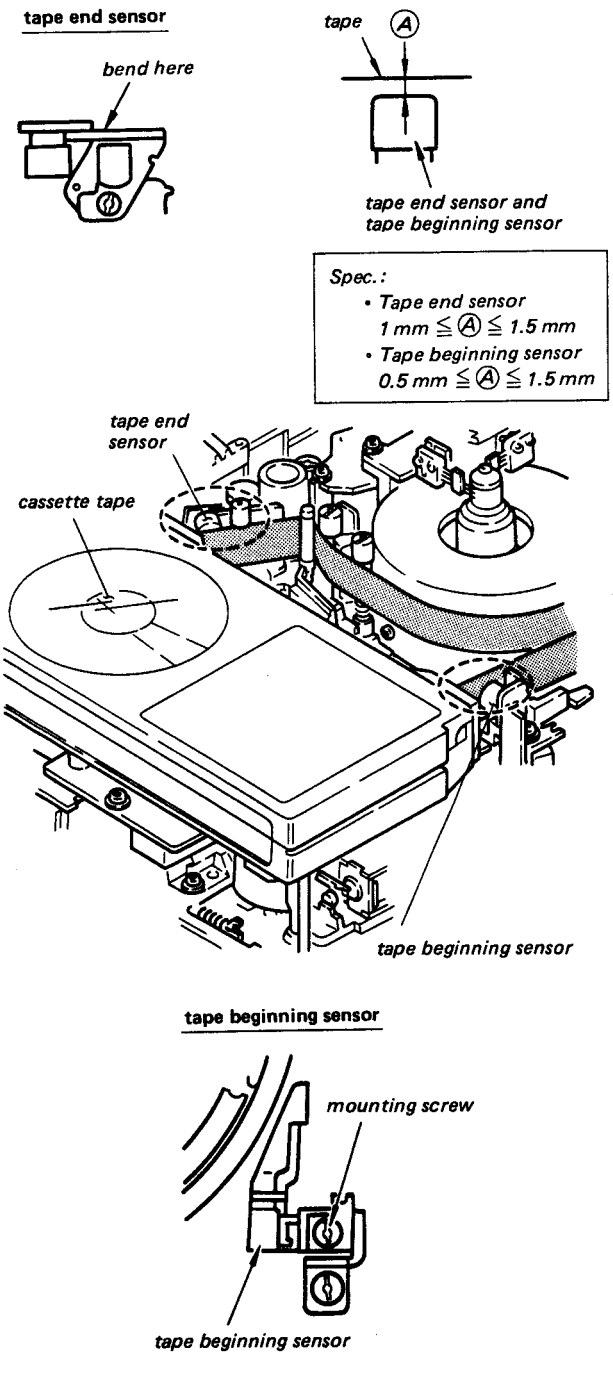
Adjustment procedure:

. When the clearance of tape end sensor is out of spec.

(1) Bend the mounting plate with pliers as shown in figure.

. When the clearance of tape beginning sensor is out of spec.

(2) Loosen the mounting screw as shown in figure and adjust the position of the tape beginning sensor.



7-8. PINCH RELEASE ARM POSITION ADJUSTMENT

Mode: Unthreading end

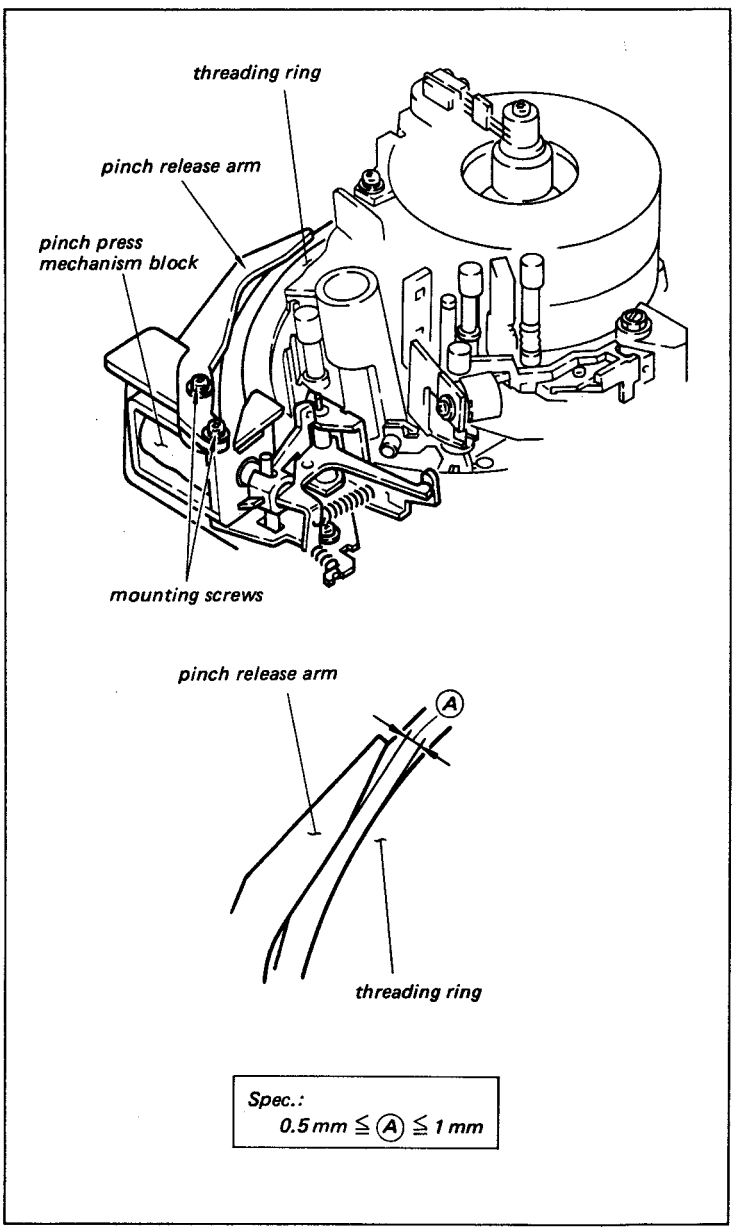
Tool: Thickness gauge

Check procedure:

(1) Check that the clearance between the pinch release arm and the threading ring meets the required specification.

Adjustment procedure:

(1) Adjust the position of the pinch release arm to meet the required specification.



7-9. CLEANING ROLLER POSITION ADJUSTMENT

Mode: Unthreading end

Check procedure:

(1) Turn the VTR on.
Turn the No.6 and No.7/SW5 on SY-4 board into ON. ("CLEANER" displays in the time counter display.)

(2) Check that the clearance between the cleaning roller block pin and the bracket meets the required specification.

(3) Insert the cassette tape in F.FWD mode. Check that the clearance between the pin and the bracket meets the required specification.

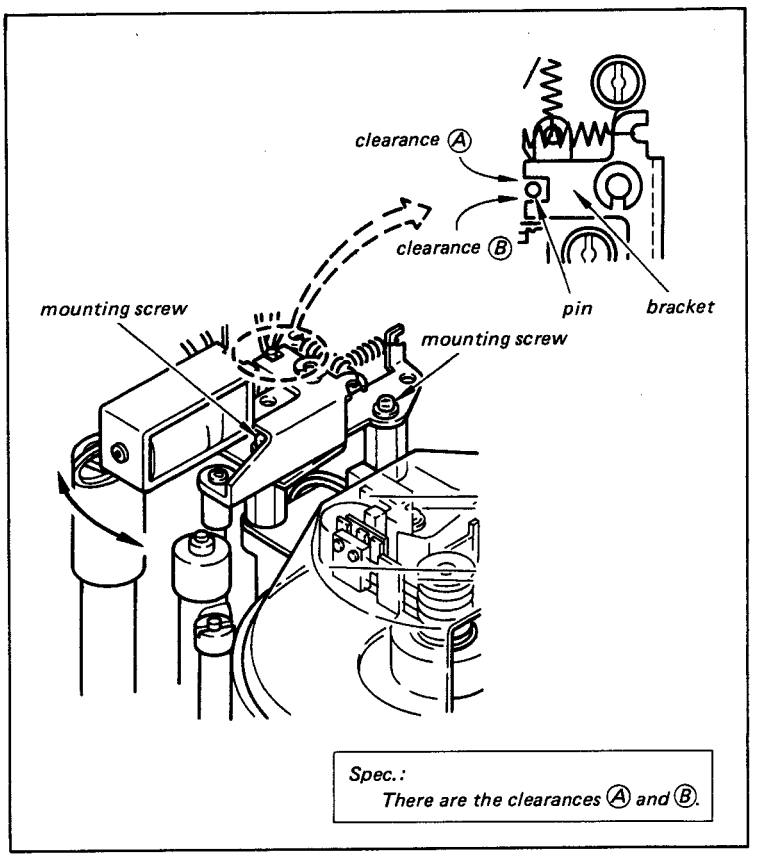
(4) If the specification is met, turn the No.6 and No.7/SW5 on SY-4 board into OFF. (If this switch is keeping to ON state for a long time, a internal fuse of the cleaning roller solenoid is melted.)

Adjustment procedure:

(1) Loosen the two mounting screws of the claning roller block and adjust to meet the required specification in the state as the check procedure (1).

(2) Check as check procedure (3).

(3) Turn the No.6 and No.7/SW5 on SY-4 board into OFF.



Spec.:
There are the clearances Ⓐ and Ⓑ.

SECTION 8
TORQUE AND BACK TENSION ALIGNMENT

ALIGNMENT INFORMATION

MODE

. Unthreading end mode

It means EJECT completion mode.
The tension regulator arm and threading ring are put back at the cassette tape side completely.

. Threading mode

Press the PLAY button. Threading mode means that the threading ring is rotating in counterclockwise direction.

. Threading end mode

Press the PLAY button. The threading ring is rotating in counter-clockwise direction, and then the threading ring rotation is stopped. This state means the threading end mode.

. PLAY mode without cassette tape

Press the PLAY button. The threading ring is rotating in counter-clockwise direction, and the pinch roller is pressed against the capstan shaft after the threading ring rotation is stopped. This state means the PLAY mode without tape.

. STNADBY OFF mode without tape

(1) Put the machine into the PLAY mode without tape. (Refer to "PLAY mode without tape".)
(2) Press the STOP button. Then, the pinch roller is disengaged from the capstan shaft.
(3) Press the STANDBY button. Then, the machine put into the STANDBY OFF mode. (The drum rotation is stopped in the STANDBY OFF mode.)

. REV mode without tape

(1) Put the machine into the PLAY mode without tape. (Refer to "PLAY mode without tape".)
(2) Turn the SEARCH DIAL in counterclockwise direction. Then, the machine put into the REV mode.

HOW TO MAKE THE LOCALLY-SPECIALLY-MADE-TAPE

This tape is used for the FWD Back Tension and REV Back Tension adjustments. Prepare this tape as follows:

(1) Wind the L-500 cassette tape to the tape beginning portion.

(2) Remove the four screws on back of the cassette tape, and remove the upper half of the cassette.

(3) Remove the lock mechanism parts and the springs on the left and right.

(4) Remove the cassette lid from the upper half.

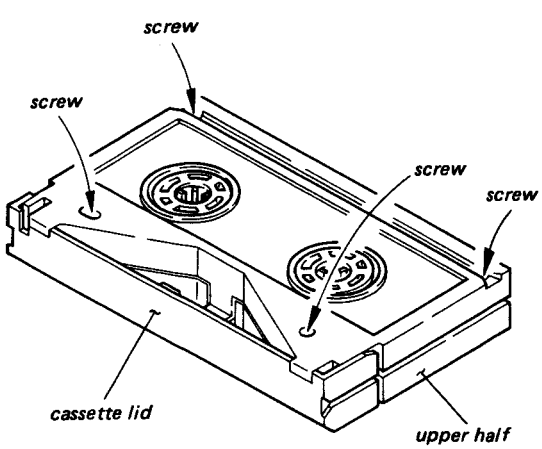
(5) Taken up the video tape on the take-up reel about 1 meter. Cut the video tape at the position as shown in figure. Remove the tade-up reel from the cassette.

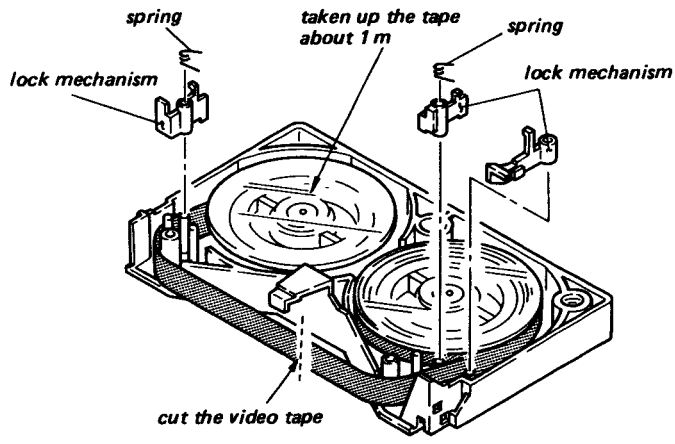
(6) Attach an adhesive tape on an end of the tape at the supply side and make a hole on the adhesive tape.

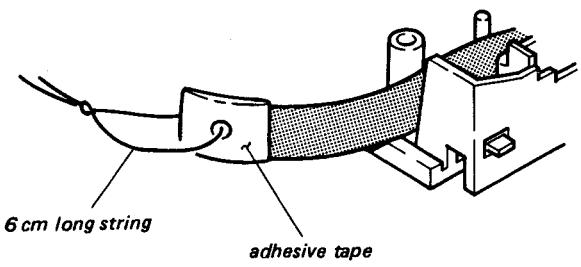
(7) Make a loop of 6cm long string through the hole.

(8) Install the upper half on the lower half with four screws from the back side.

< locally-specially-made-tape >







8-1. S SOFT BRAKE TORQUE ADJUSTMENT

Tool: Reel table tension gauge
Tension scale (20g full scale)

Mode: Unthreading end (POWER on state)

Preparation:

(1) Remove the left and right side ornamental panels.

(2) Remove the control panel.

Check procedure:

(1) Wind the string of the reel table tension gauge in the clockwise direction.

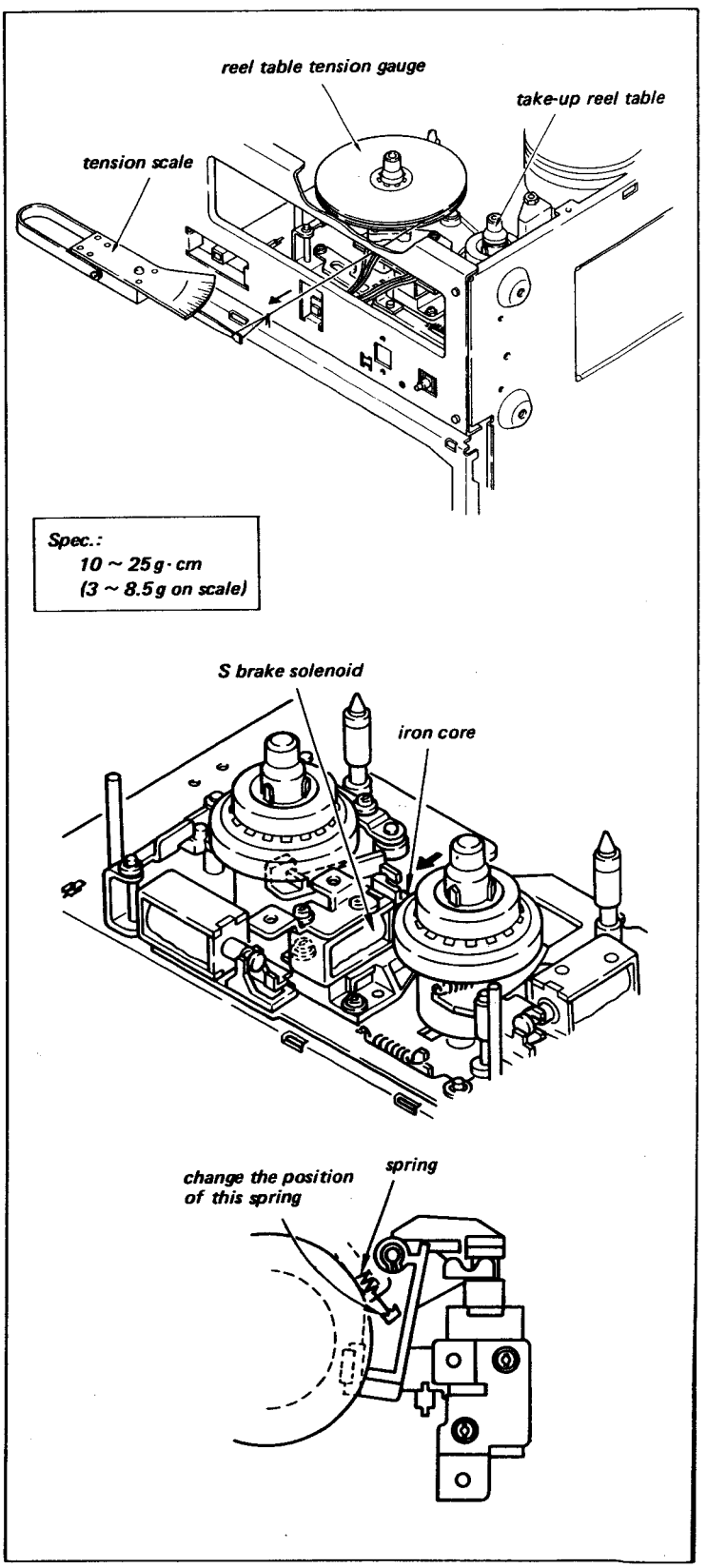
(2) Install the reel table tension gauge on the supply reel table, and hook a tension scale on an end of the string.

(3) Push the iron core of the S brake solenoid into the fully energized position. (Don't remove finger.)

(4) In the energized position, pull out the tension scale to the direction of the arrow and confirm that the scale reading is in the specification.

Adjustment procedure:

(1) Change the position of the spring on the S brake block so that it meets the required specification.



8-2. REEL FG ADJUSTMENT

Mode: Play

Check procedure:

(1) Remove the SV-55P board. Extend it with extension board.

(2) Connect the oscilloscope to each terminals, and check that the waveform meets the required specification.

Adjustment procedure:

(1) Adjust each variable resistor to meet the required specification.

terminals		duty	adjustment volume
S	TP504	50% ± 2%	RV507
	TP501	50% ± 2%	RV508
T	TP502	50% ± 2%	RV505
	TP503	50% ± 2%	RV506

8-3. TENSION SENSOR IMPRESSED VOLTAGE ADJUSTMENT

Mode: STOP

Tool: Digital Voltmeter

Check procedure:

(1) Remove the SV-55P board. Extend it with extension board.

(2) Connect the digital voltmeter to TP513/SV-55P board, and check that the indication meets the required specification. (Connect GND to E-3.)

Adjustment procedure:

(1) Adjust the RV520/SV-55P board to meet the required specification.

Spec.:
TP513/SV-55P
9.0 ± 0.1 V

8-4. FWD BACK TENSION ADJUSTMENT

Mode: Threading end →PLAY

Tool: Locally-specially-made-tape (Refer to alignment information)
Tension scale (100g full scale)

Preparation:

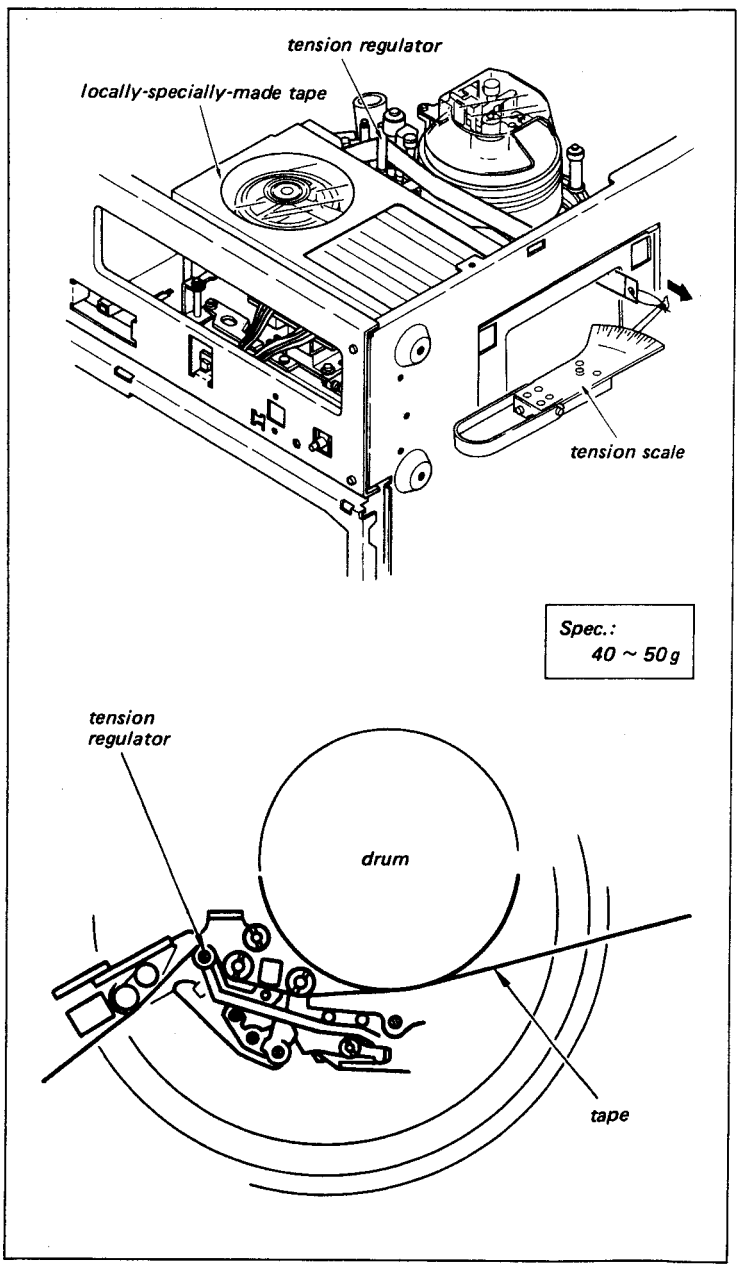
(1) Remove the right side ornamental panel.
(2) Remove the handle on the chassis of the control panel side.
(3) Set the TROUBLE INHIBIT switch (S5-8) on the SY-4 board to ON state. (After completing this check and/or adjustment, be sure to set this switch to OFF state.)
(4) Remove the SV-55P board. EXtend it with extension baord.

Check procedure:

(1) Put the machine into the threading end state. Install the locally-specially-made-tape.
(2) Thread the tape as shown in figure. Thread an end of the tape through the square hole of the side chassis as shown in figure.
(3) Hook the tension scale on an end of the tape.
(4) Put the machine into the PLAY mode.
(5) Pull out the tape at the constant speed of approx. 12cm/sec. in the direction of the arrow. Check that the scale reading meets the required specification.
(6) If the specification is met, perform the step (2) in the adjustment procedure.

Adjustment procedure:

(1) Adjust RV502 on the SV-55P board to meet the required specification.
(2) Set the TROUBLE INHIBIT switch (S5-8) on the SY-4 board to OFF state.



8-5. REV TENSION ADJUSTMENT

Mode: Threading end →REV

Tool: Locally-specially-made-tape (Refer to alignment information)
Tension scale (50g full scale)

Preparation:

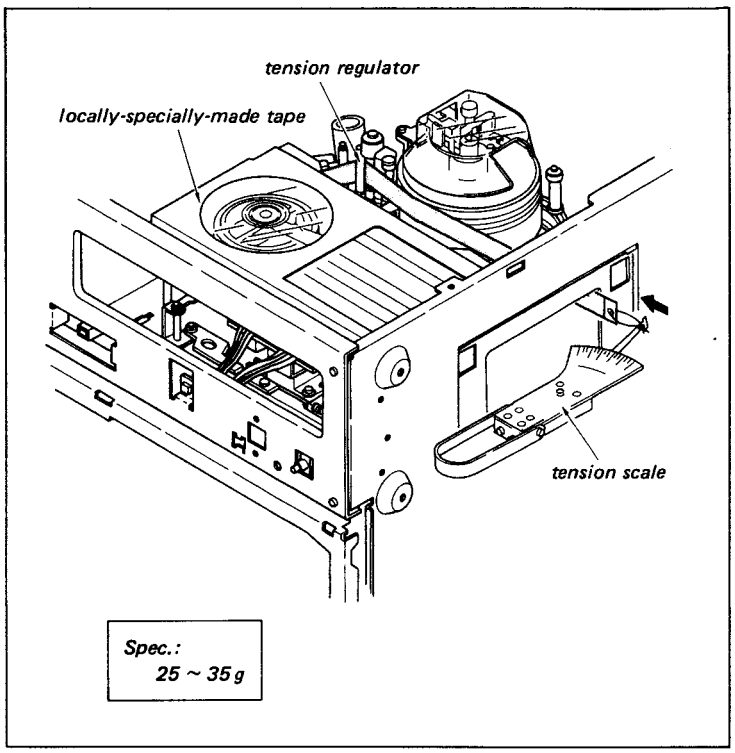
(1) Remove the right side ornamental panel.
(2) Remove the handle on the chassis of the control panel side.
(3) Set the TROUBLE INHIBIT switch (S5-8) on the SY-4 board to ON state. (After completing this check and/or adjustment, be sure to set this switch to OFF state.)
(4) Remove the SV-55P board. Extend it with extension board.

Check procedure:

(1) Put the machine into the threading end state. Install the locally-specially-made-tape.
(2) Thread the tape as shown in figure. Thread an end of the tape through the square hole of the side chassis as shown in figure.
(3) Hook a tension scale on an end of the tape.
(4) Put the machine into REV mode.
(5) Let the tape be pulled at the constant speed of approx. 12cm/sec. Check that the scale reading meets the required specification.
(6) If the specification is met, perform the step (2) in the adjustment procedure.

Adjustment procedure:

(1) Adjust RV501 on the SV-55P board to meet the required specification.
(2) Set the TROUBLE INHIBIT switch (S5-8) on the SY-4 board to OFF state.



SECTION 9
TAPE RUN ALIGNMENT

ALIGNMENT INFORMATION

ALIGNMENT TAPE

. Alignment tape for tracking adjustment

CR2-1PS (8-960-098-02)

Contents	For use
Video, Y track : 4MHz signal (track width : 73μ) C track : 5MHz signal (track width : 73μ) Audio, blank TC, CTL signal	.Video tracking adjustment for player .CTL head position adjustment for player .TC head position adjustment for player .Switching position adjustment for player and recorder.

. Alignment tape for general adjustment

CR5-1PS (8-960-098-22)

Contents	For use
Video, color-bar signal (100% white level) TC, EBU time code signal	.Video, Audio, Servo and Time Code system adjustmens
Video, gated sweep signal Audio, 1kHz signal	.Video and Audio adjustments
Video, 2T pulse/2T bar signal Audio, 10kHz signal	.Video adjustment .Audio head position adjustment
Video, monoscope signal (switching position is shifted) Audio, 1kHz,7kHz,10kHz,15kHz signals	.Video head dihedral adjustment .Audio frequency response adjustment
Video, blank Audio, blank CTL, audio 0.8kHz signal	.CTL head height adjustment

MODE

. **Unthreading end mode**

It means EJECT completion mode.

The tension regulator arm and threading ring are put back at the cassette tape side completely.

. **Threading mode**

Press the PLAY button. Threading mode means that the threading ring is rotating in counterclockwise direction.

. **Threading end mode**

Press the PLAY button. The threading ring is rotating in counter-clockwise direction, and then the threading ring rotation is stopped. This state means the threading end mode.

. **PLAY mode without cassette tape**

Press the PLAY button. The threading ring is rotating in counter-clockwise direction, and the pinch roller is pressed against the capstan shaft after the threading ring rotation is stopped. This state means the PLAY mode without tape.

. **STNADBY OFF mode without tape**

(1) Put the machine into the PLAY mode without tape. (Refer to "PLAY mode without tape".)

(2) Press the STOP button. Then, the pinch roller is disengaged from the capstan shaft.

(3) Press the STANDBY button. Then, the machine put into the STANDBY OFF mode. (The drum rotation is stopped in the STANDBY OFF mode.)

. **REV mode without tape**

(1) Put the machine into the PLAY mode without tape. (Refer to "PLAY mode without tape".)

(2) Turn the SEARCH DIAL in counterclockwise direction. Then, the machine put into the REV mode.

HOW TO MAKE THE CASSETTE TAPE WITHOUT LID

Since the VTR is designed compact size, the check and adjustment can not be performed if cassette tape lid is installed.

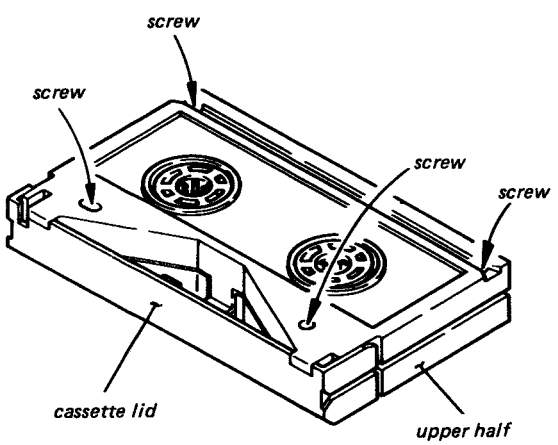
The cassette tape lid removal procedures are as follows:

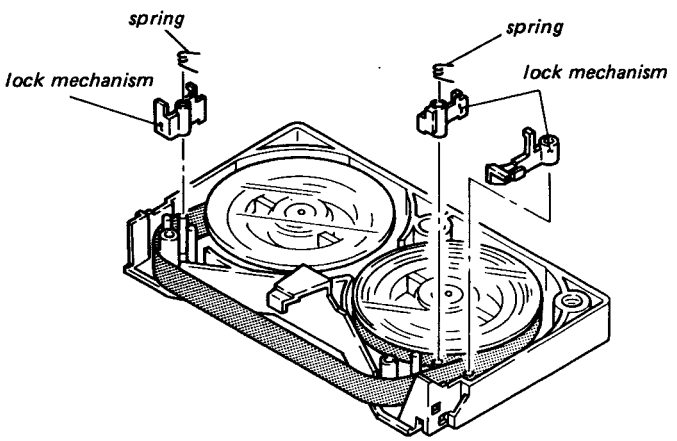
(1) Remove the four screws on the back of the cassette as shown in figure, and remove the upper half of the cassette.

(2) Remove the lock mechanism parts and the springs on the left and right.

(3) Remove the cassette lid from the upper half.

(4) Install the upper half on the lower half with four screws from the back side.





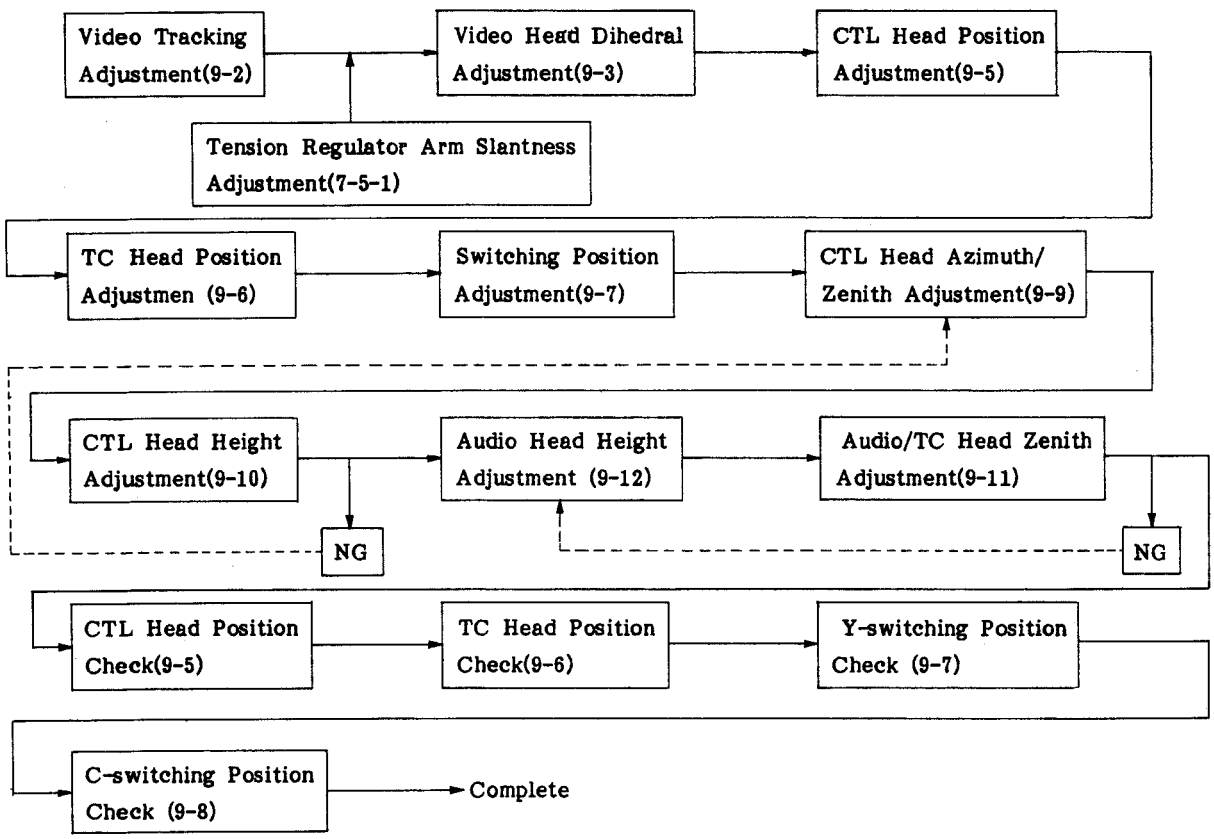
HOW TO MAKE THE ALIGNMENT TAPE WITHOUT LID

Since the VTR is designed compact size, the check and adjustment can not be performed if the alignment tape lid is installed.

Remove the lid of the alignment tape CR2-1PS for the tracking adjustment referring "How to make the cassette tape without lid".

ADJUSTMENT STEPS OF TRACKING ADJUSTMENT

. Perform the tracking adjustment of Video, Audio, CTL and Time Code Heads as follows.



9-1. TAPE RUN ADJUSTMENT

Mode: Playback

Tool: Cassette tape without lid (Never use the alignment tape)

Check procedure:

(1) Insert a cassette tape and put the machine into the playback mode.

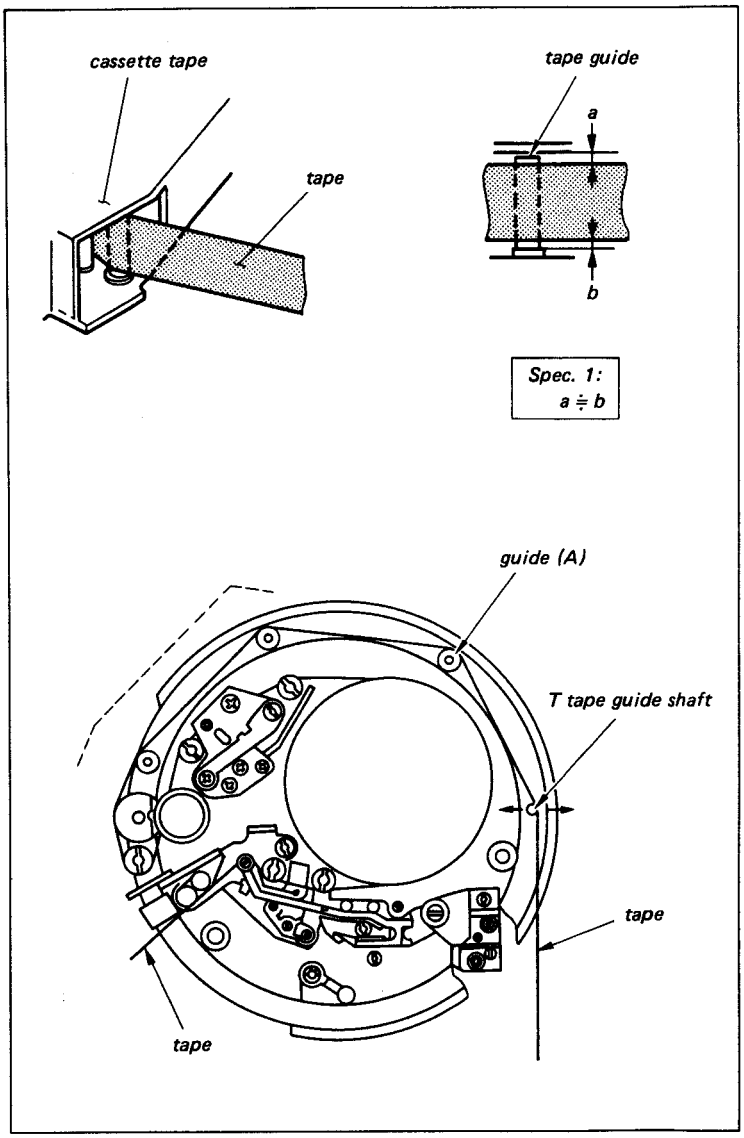
(2) Check that the positional relationship between the tape and the tape guide at the take-up side of the cassette tape is as shown in figure. (Spec.(1))

(3) Check that the tape tension is exactly equal at the tape top and tape bottom around the roller guide on the threading ring as shown in figure. (Spec.(2)).

Adjustment procedure:

(1) Adjust the height of the guide (A) on the threading ring to meet the required specification (1).

(2) Bend the T tape guide shaft in the direction of the arrow to meet the required specification (2).



9-2. VIDEO TRACKING ADJUSTMENT

Mode: Playback the alignment tape

Tool: Alignment tape, CR2-1PS
Oscilloscope
Allen wrench (each edge has 1.27mm)
Inspection mirror

Preparation:

(1) Remove the YC-14P board. Extend it with the extension board.

(2) Connect the oscilloscope as follows:
CH-1 : TP404/YC-14P board
EXT.TRIG : TP402/YC-14P board

(3) Playback the alignment tape.

Check procedure:

(1) When turn the TRACKING volume, check that the RF waveform maintains a flat envelope while amplitude increases and decreases.

(2) Check that the RF envelope fluctuation and head-to-tape contact are within the specification at the FIXED position of the TRACKING volume.

(3) Check that the tape curls at the tension regulator, TG-1, TG-2, TG-3 and the tape threading guide meet the required specification.

(4) Check that the RF envelope head-to-tape contact is within the specification in the REV x 1 mode.

Adjustment procedure:

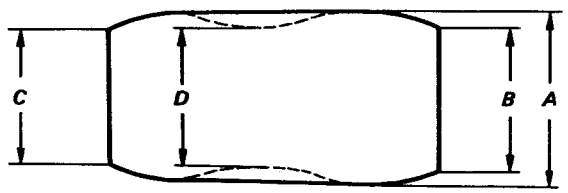
When adjust the tape guide height.

. Loosen the set screws of each tape guide and adjust with adjusting nut.

When the tracking at the drum entrance side is no good.

(1) Turn the adjusting nuts of TG-1 and TG-2, and make clearances at (a), (b), of TG-1 and (a) of TG-2 as shown in figure 2.

(2) Turn the adjusting nut of the tension regualtor so that the RF envelope waveform changes from (i) state to (ii) state as shown in figure 3. Check that the tape runs in contact with the guide flange at the (a) portion of the tension



Spec.:

• FWD mode	• REV mode
head-to-tape contact	head-to-tape contact
$\frac{C}{A} \geqq 0.8$	$\frac{C}{A} \geqq 0.6$
$\frac{B}{A} \geqq 0.8$	$\frac{B}{A} \geqq 0.6$
fluctuation	
$\frac{D}{A} \geqq 0.9$	

Fig. 1.

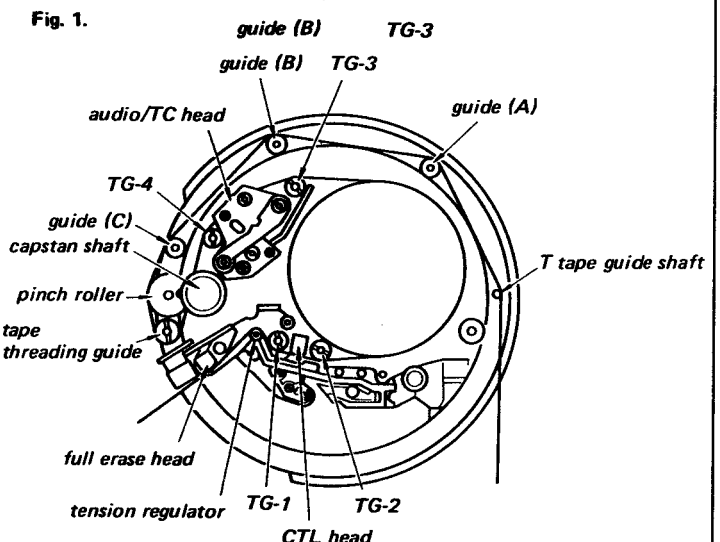
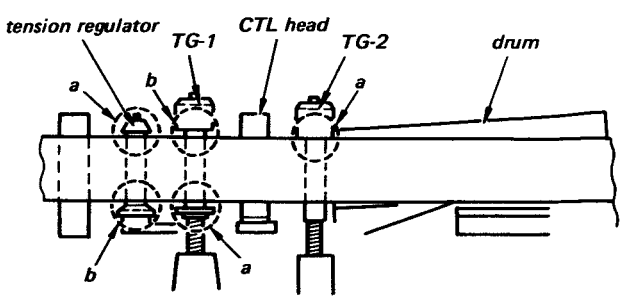


Fig. 2.



regulator. If not, turn the adjusting screw (b) of tension regulator in counter-clockwise direction as shown in figure 4.

(3) Turn the adjusting nut of TG-2 so that the tape runs in contact with the guide flange at the (a) portion of TG-2 and the RF envelope waveform flatten. Check that the tape is not in contact with the guide flange at the (b) portion of TG-1. The tape curl at the (a) portion of tension regulator and/or (a) portion of TG-2 is acceptable within the range as shown in figure 5. But tape curl at the drum is not acceptable.

(4) Turn the TRACKING volume in FIXED position. Put the machine into REV x 1 mode.

(5) Check that the RF envelope waveform is small at the drum entrance side as shown in figure 6.

(6) Put the machine into FWD mode. Turn the adjusting nut of TG-1 so that the tape runs in contact with the guide flange at the (a) portion. The tape curl at (a) portion is acceptable within the range as shown in figure 5.

(7) Put the machine into REV x 1 mode. Check that the RF envelope waveform is flat and the tape-to-head contact meets the required specification.

(8) Put the machine into FWD mode. Check that the tape-to-head contact meets the required specification.

(9) Tighten the set screws of each tape guide, and check again.

. When the tracking at the drum exit side is no good.

(1) Turn the adjusting nuts of TG-3 and TG-4, and make clearances at the (a) of TG-3, (b) of TG-4 and (a) and (b) of the tape threading guide as shown in figure 7.

(2) Turn the adjusting nut of TG-4 so that the RF envelope waveform changes from (i) state to (ii) state as shown in figure 8. Check that the tape is not in contact with the guide flange at the (a) portion of TG-3 and (a) portion of the tape threading guide.

Fig. 3.

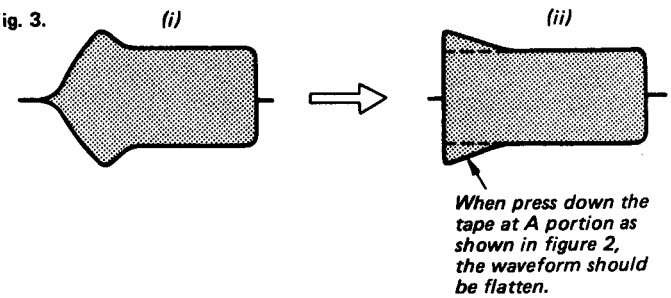


Fig. 4.

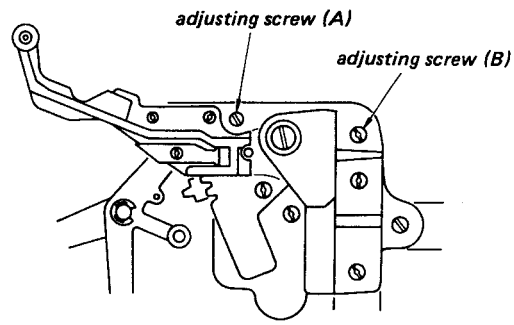
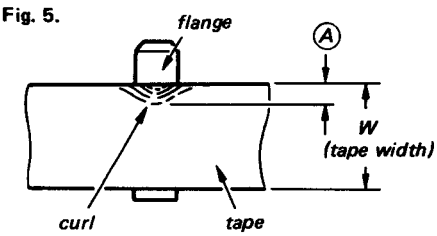


Fig. 5.



Spec.: $A \leqq \frac{1}{6} W$

Fig. 6.

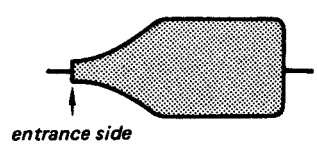
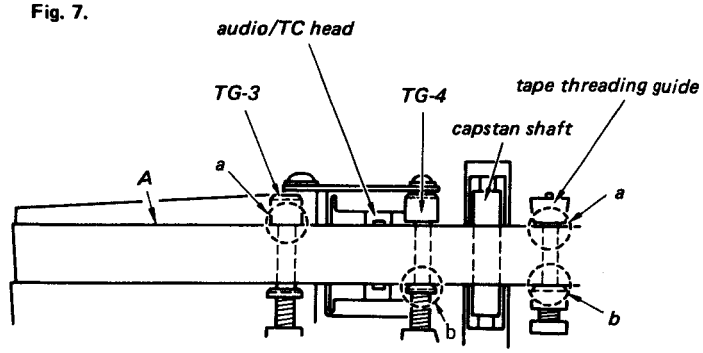


Fig. 7.



(3) Turn the adjusting nut of TG-3 so that the tape runs in contact with the guide flange at the (a) portion of TG-3 and the RF envelope waveform flattens.

(4) Turn the adjusting nut of the tape threading guide so that the tape runs in contact with the guide flange lightly at the (a) portion.

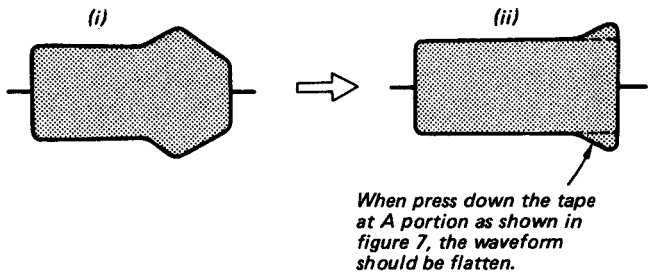
(5) Turn the TRACKING volume in FIXED position. Check that the tape-to-head contact meets the required specification.

(6) Put the machine into REV x 1 mode.

(7) Check that the RF envelope waveform is flat and the tape-to-head contact meets the required specification.

(8) Tighten the set screws of each tape guides, and check again.

Fig. 8.



When press down the tape at A portion as shown in figure 7, the waveform should be flatten.

9-3. VIDEO HEAD DIHEDRAL ADJUSTMENT

. This adjustment is performed only for the Y head.

. The reference head is CH-A.

Mode: Playback the alignment tape

Tool: Alignment tape, CR5-1PS
Monitor TV
Dihedral adjusting screw (four pieces)
Oscilloscope

Preparation:

(1) Connect the oscilloscope to TP5/PR-48PS board. Connect the monitor TV to CH-1 OUT terminal of the oscilloscope.

(2) Insert the alignment tape, and playback the monoscope signal (for dihedral adjustment) of the alignment tape.

Check procedure:

(1) Check the vertical line beneath the switching point visually on a monitor. If the vertical line does not split into two lines, no adjustment is necessary.

Adjustment procedure:

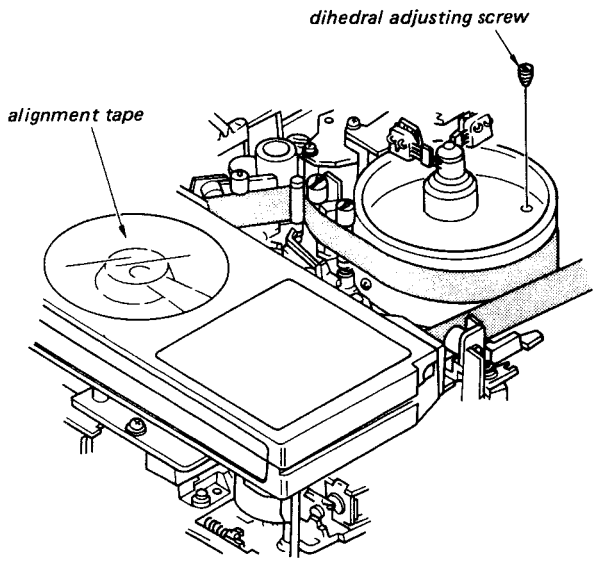
(1) Screw lightly four dihedral adjusting screws into the upper drum.

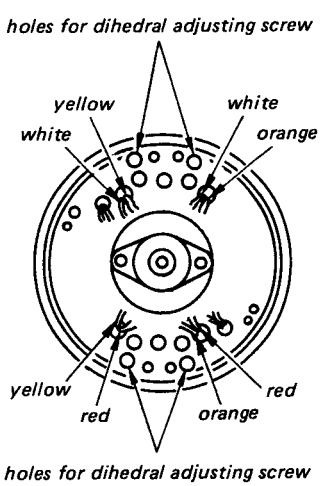
(2) Turn the adjusting screw adjacent to the Y head with red/yellow leads until some resistance is felt.

(3) If this screw is turned further, the video head is moved and the dihedral is adjusted. Therefore, turn this screw an additional quarter turn.

(4) Check for dihedral distortion. If the distortion has gotton worse, turn this screw back one turn and tighten the other screw (red/orange leads side) a quarter turn. Check again for dihedral distortion and continue in this way until dihedral error is eliminated.

(5) When the adjustment is completed, remove the four dihedral adjusting screws. After removel, playback the alignment tape and check dihedral again as error sometimes reappears after screws are removed.





(NOTE)

Be sure to stop the rotation of the upper drum in the dihedral adjustment. Perform the following steps.

(1) Press the STOP button.
(2) Press the STANDBY button, then the machine put into the STANDBY OFF state. (The rotation of the upper drum is stopped.)
(3) After dihedral adjustment, press the STANDBY button again.
(4) Press the PLAY button.

9-4. CTL PORALITY CHECK

mode: Playback the alignment tape

Tool: Alignment tape, CR2-1PS
Oscilloscope

Preparation:

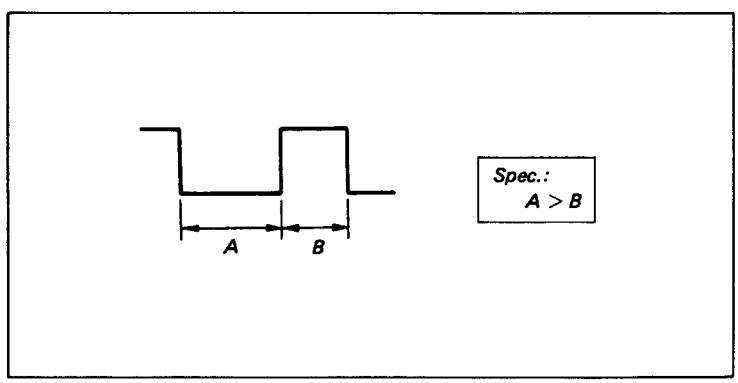
(1) Remove the SV-55P board. EXtend it with extension board.
(2) Connect the oscilloscope as follows:
CH-1 : TP14/SV-55P board
EXT.TRIG : TP15/SV-55P board
(3) Playback the alignment tape.

Check procedure:

(1) Check that the waveform meets the required specification.

Adjustment procedure:

(1) Change the porality of wiring on CTL head.



9-5. CTL HEAD POSITION ADJUSTMENT

Mode: Playback the alignment tape

Tool: Alignment tape, CR2-1PS
Oscilloscope

Preparation:

(1) Remove the YC-14P board. Extend it with extension board.

(2) Connect the oscilloscope as follows:
CH-1 : TP404/YC-14P board
EXT.TRIG : TP402/YC-14P board

(3) Playback the alignment tape.

Check procedure:

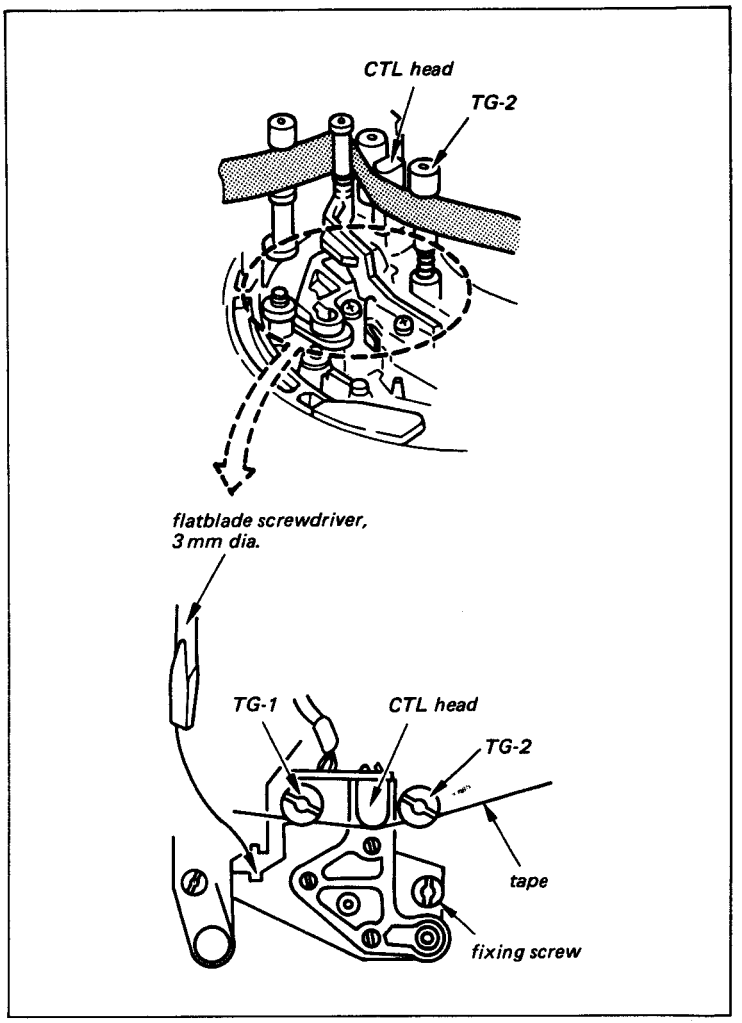
(1) Check that the RF waveform has the maximum amplitude when the TRACKING volume is set in the detent position.

Adjustment procedure:

(1) Loosen the fixing screws 1/4 to 1/2 turn.

(2) Insert a flatblade screwdriver, 3mm dia. into the hole of CTL head base. Adjust the position of CTL head block to meet the required specification.

(3) After adjustment, perform Sec. 9-6. TC Head Position Adjustment.



9-6. TC HEAD POSITION ADJUSTMENT

. It is required that the CTL Head Position Adjustment is checked to be correct or properly adjusted before initiating this adjustment.

Mode: Playback the alignment tape

Tool: Alignment tape, CR2-1PS
Dual trace oscilloscope

Preparation:

(1) Connect the oscilloscope as follows:
CH-1 : TP14/SV-55P board
CH-2 : TP1/DR-21P board
TRIG : INTERNAL, CH-1

(2) Playback the alignment tape.

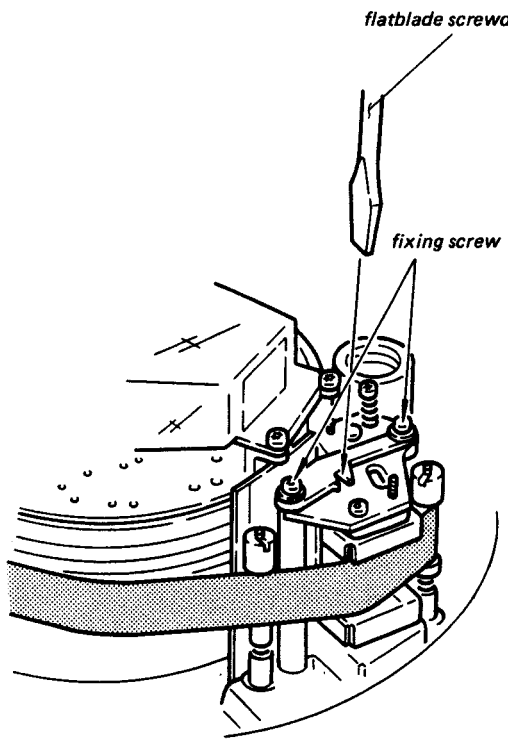
Check procedure:

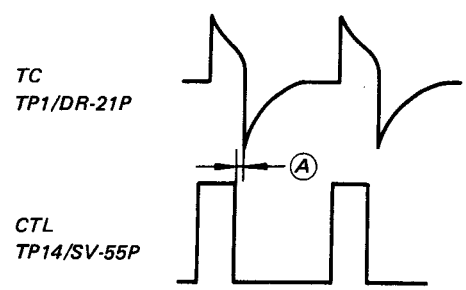
(1) Check that the waveform meets the required specification.

Adjustment procedure:

(1) Loosen the fixing screw.

(2) Adjust the position of the head block with a flatblade screwdriver, 3mm dia. to meet the required specification.





Spec.:
Ⓐ = 0 ± 400 µsec.

9-7. Y-SWITCHING POSITION ADJUSTMENT

9-7-1. Y-Switching Position Adjustment

Mode: Playback the alignment tape

Tool: Alignment tape, CR2-1PS
Oscilloscope

Preparation:

(1) Remove the SV-55P board. Extend it with extension board.

(2) Connect the color-bar signal to VIDEO IN.

(3) Turn the MODE SELECT switch of front panel to EDIT.

(4) Light up the VIDEO INSERT button of front panel by pressing it.

(5) Short between TP12/SV-55P board and E7/SV-55P board with short clip. (Cancel the H lock.)
Short between IC128 pin 11 (TP35) and IC128 pin 5 (TP34) with short clip in the machine of serial No. up to 10111.

(6) Connect the oscilloscope as follows:
CH-1 : TP404/YC-14P board
EXT.TRIG : TP402/YC-14P board

(7) Playback the alignment tape.

Check procedure:

(1) Turn the TRACKING volume in FIXED position.

(2) Check that the lack of the CH-A and CH-B RF envelopes meet the required specification (1) at the CH-1 of the oscilloscope.

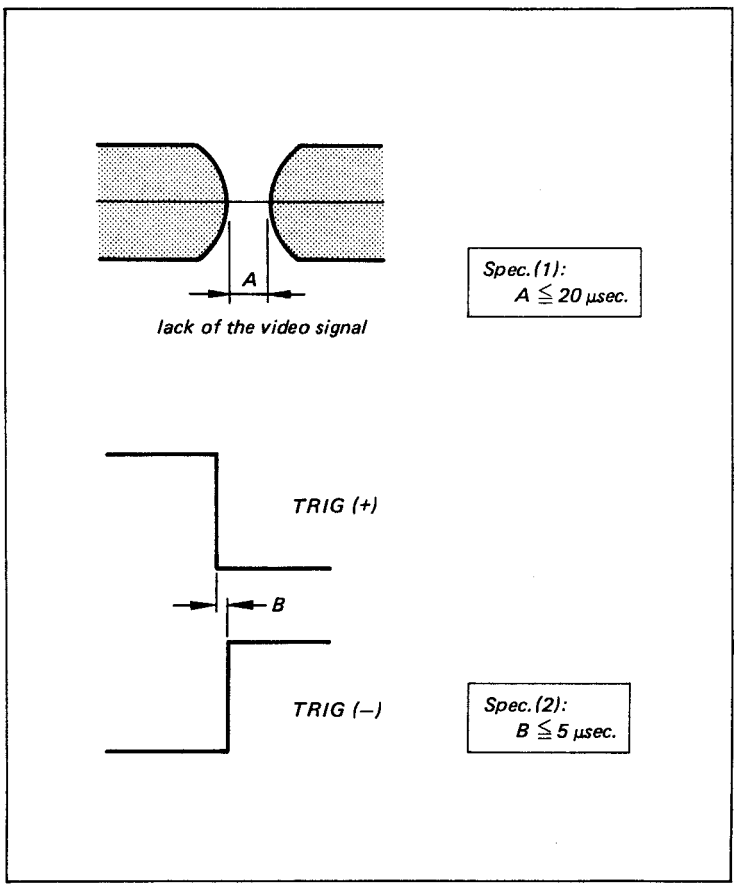
(3) Connect the oscilloscope CH-1 to TP8/SV-55P board.

(4) When change (+) and (-) of TRIG.SLOPE of the oscilloscope, check that the time difference of CH-1 pulse meets the required specification (2).

(5) If the specifications (1) and (2) are met, remove the short clip.

Adjustment procedure:

(1) Adjust RV24/SV-55P board and RV3/SV-55P board to meet the required specifications (1) and (2).



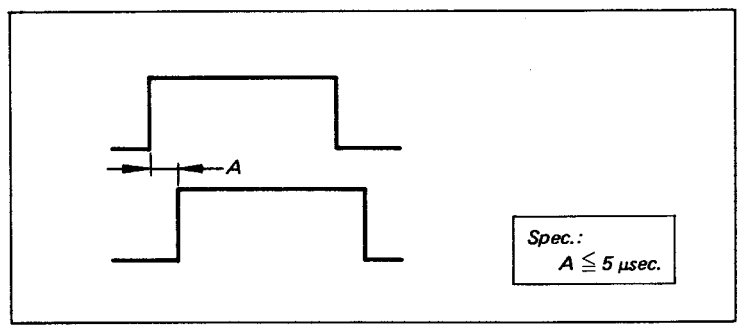
(2) After adjustment, remove the short clip.
(3) After adjustment, perform sec.9-8, C-Switching Position Adjustment.

9-7-2. Y-Switching Pulse Phase Adjustment

Mode: Color-bar signal recording
Tool: Oscilloscope
Preparation:
(1) Remove the SV-55P board. Extend it with extension board.
(2) Connect the color-bar signal to VIDEO IN.
(3) Turn the REF.VIDEO selector of connector panel to AUTO.
(4) Short between TP3/SV-55P board and E6/SV-55P board with short clip. (Stop the circuit function.)
(5) Connect the oscilloscope as follows:
CH-1 : TP12/SV-55P board
EXT.TRIG : TP15/SV-55P board
(6) Put the machine into record mode.

Check procedure:
(1) When switch TRIG.SLOPE of the oscilloscope, check that tha phase difference meets the required specification.
(2) If the specification is met, remove the short clip.

Adjustment procedure:
(1) Adjust RV5/SV-55P board to meet the required specification.
(2) After adjustment, remove the short clip.
(3) After adjustment, perform sec 9-8, C-Switching Position Adjustment.



9-8. C-SWITCHING POSITION ADJUSTMENT

9-8-1. Drum Lock Phase Adjustment (REC mode)

Mode: Color-bar signal recording
Tool: Oscilloscope
Preparation:

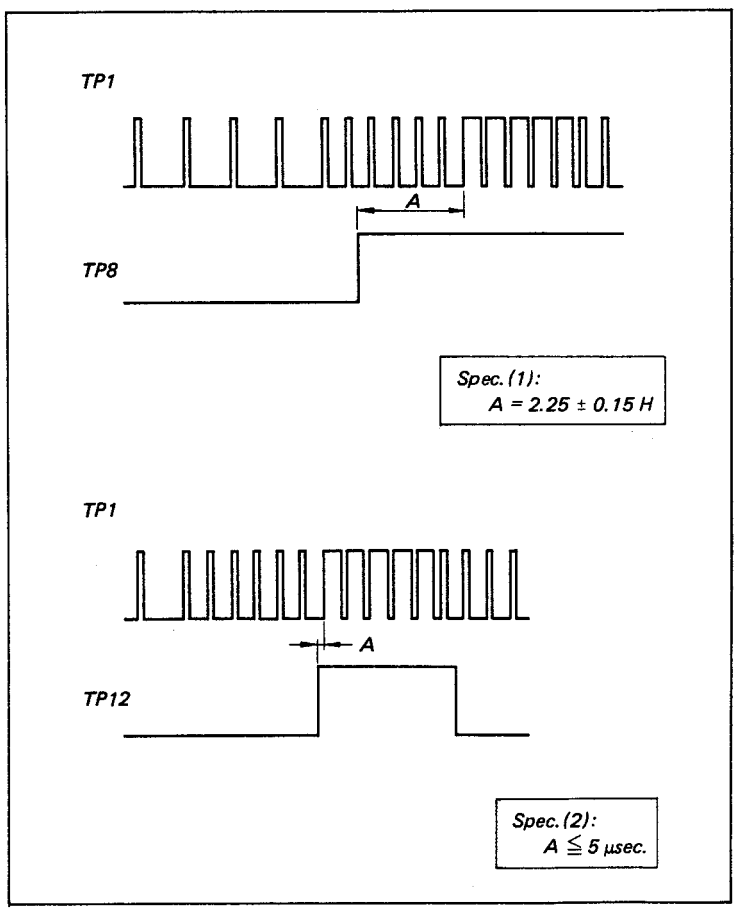
(1) Remove the SV-55P board. Extend it with extension board.
(2) Short between TP3 and E6, and between TP12 and E7 on SV-55P board with short clips.
(3) Connect the oscilloscope as follows:
CH-1 : TP1/SV-55P board
CH-2 : TP8/SV-55P board
EXT.TRIG : TP15/SV-55P board
(4) Put the machine into record mode.

Check procedure:

(1) Check that the waveform meets the required specification (1).
(2) Remove the short clip between TP12 and E7.
(3) Connect the CH-2 of oscilloscope to TP12/SV-55P board.
(4) Check that the specification (2) is met.
(5) If the specification is met, remove the short clip.

Adjustment procedure:

(1) Adjust RV9/SV-55P board to meet the specification (1) while short between TP3 and E6, and between TP12 and E7 with short clips.
(2) Adjust RV13/SV-55P board so that the specification (2) is met, when remove the short clip between TP12 and E7 and when connect the CH-2 of oscilloscope to TP12/SV-55P board.
(3) After adjustment, remove the short clip.



9-8-2. 8H Advance Adjustment

Mode: Playback the alignment tape

Tool: Alignment tape, CR5-1PS
Oscilloscope

Preparation:

(1) Remove the SV-55P board. Extend it with extension board.

(2) Connect the color-bar signal to VIDEO IN.

(3) Short between TP3/SV-55P board and E6/SV-55P board with short clip.

(4) Connect the oscilloscope as follows:
CH-1 : TP1/SV-55P board
CH-2 : TP12/SV-55P board
EXT.TRIG : TP15/SV-55P board

(5) Playback the color-bar portion of the alignment tape.

Check procdure:

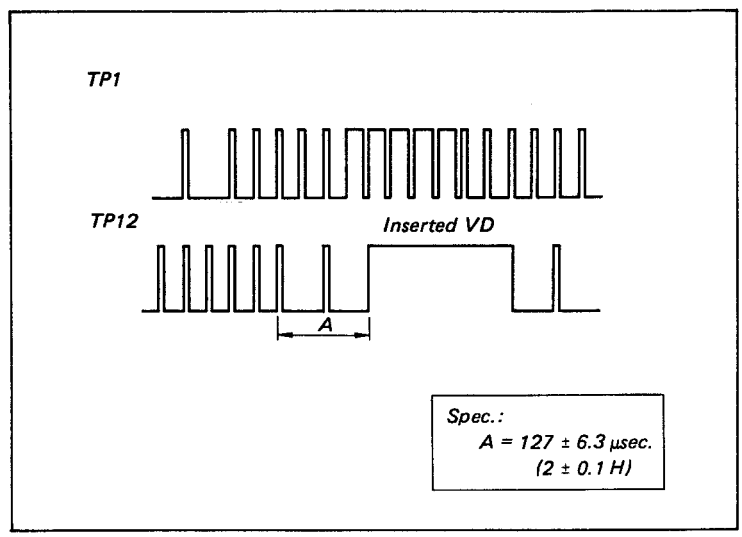
(1) Check that the waveform meets the required specification.

(2) When the specification is met, remove the short clip.

Adjustment procedure:

(1) Adjust the RV12/SV-55P board so that the specification is met.

(2) After adjustment, remove the short clip.



9-8-3. Drum Lock Phase Adjustment (Playback mode)

Mode: Playback the alignment tape

Tool: Alignment tape, CR5-1PS
Oscilloscope

Preparation:

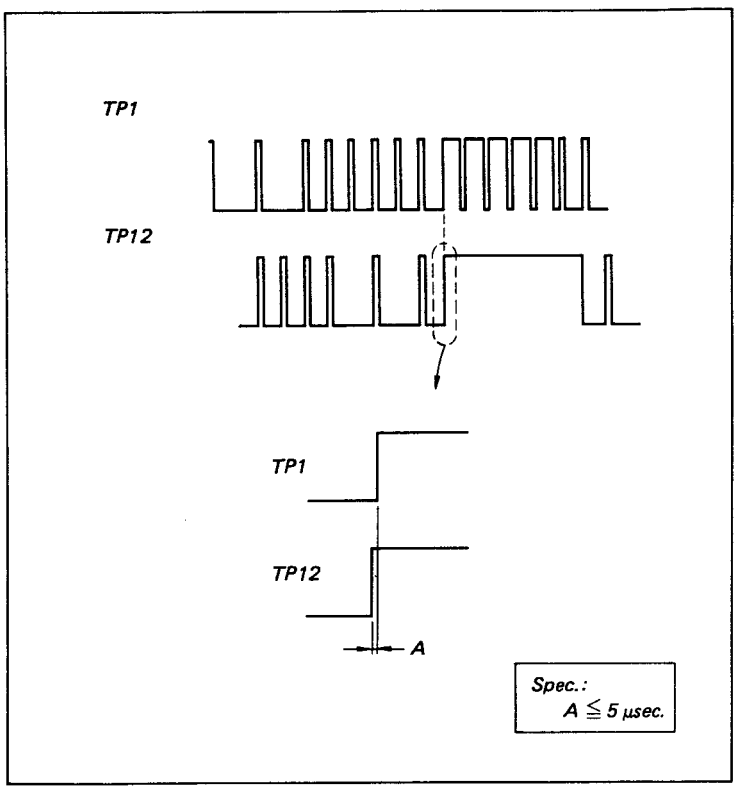
(1) Remove the SV-55P board. Extend it with extension board.
(2) Connect the color-bar signal to VIDEO IN.
(3) Turn the INPUT SELECT switch of front panel into NORMAL position, and the REF.VIDEO selector of connector panel into AUTO position.
(4) Short between the TP3/SV-55P board and E7/SV-55P board with short clip.
(5) Connect the oscilloscope as follows:
CH-1 : TP1/SV-55P board
CH-2 : TP12/SV-55P board
(6) Playback the color-bar portion of the alignment tape.

Check procedure:

(1) Check that the waveform meets the required specification.
(2) When the specification is met, remove the short clip.

Adjustment procedure:

(1) Adjust the RV25/SV-55P board to meet the required specification.
(2) After adjustment, remove the short clip.



9-8-4. Blanking Control Adjustment

Mode: REC

Tool: Oscilloscope

Preparation:

(1) Remove the SV-55P board. Extend it with extension board.

(2) Connect the color-bar signal to VIDEO IN.

(3) Turn the INPUT SELECT switch of front panel into NORMAL position, and the REF.VIDEO selector into AUTO position.

(4) Short between TP3 and E6, and between TP12 and E7 on the SV-55P board with short clips.

(5) Turn the MODE SELECT switch of the front panel to EDIT.

(6) Light up the INSERT VIDEO button of the front panel by pressing it.

(7) Check that the S5/BC-5 board is in the OFF position.

(8) Connect the oscilloscope as follows:
CH-1 : TP8/SV-55P board
CH-2 : TP1/BC-5 board
TRIG : TP15/SV-55P board

(9) Insert a cassette tape in REC mode.

Check procedure:

(1) When change (+) and (-) of TRIG.SLOPE of the oscilloscope, check that the time difference of CH-2 pulse meet the specification (1).

(2) When turn TRIG.SLOPE of the oscilloscope to (+), check that the time difference of CH-1 pulse meet the specification (2).

(3) When turn TRIG.SLOPE of the oscilloscope to (-), check that the time difference of CH-1 pulse meet the specification (3).

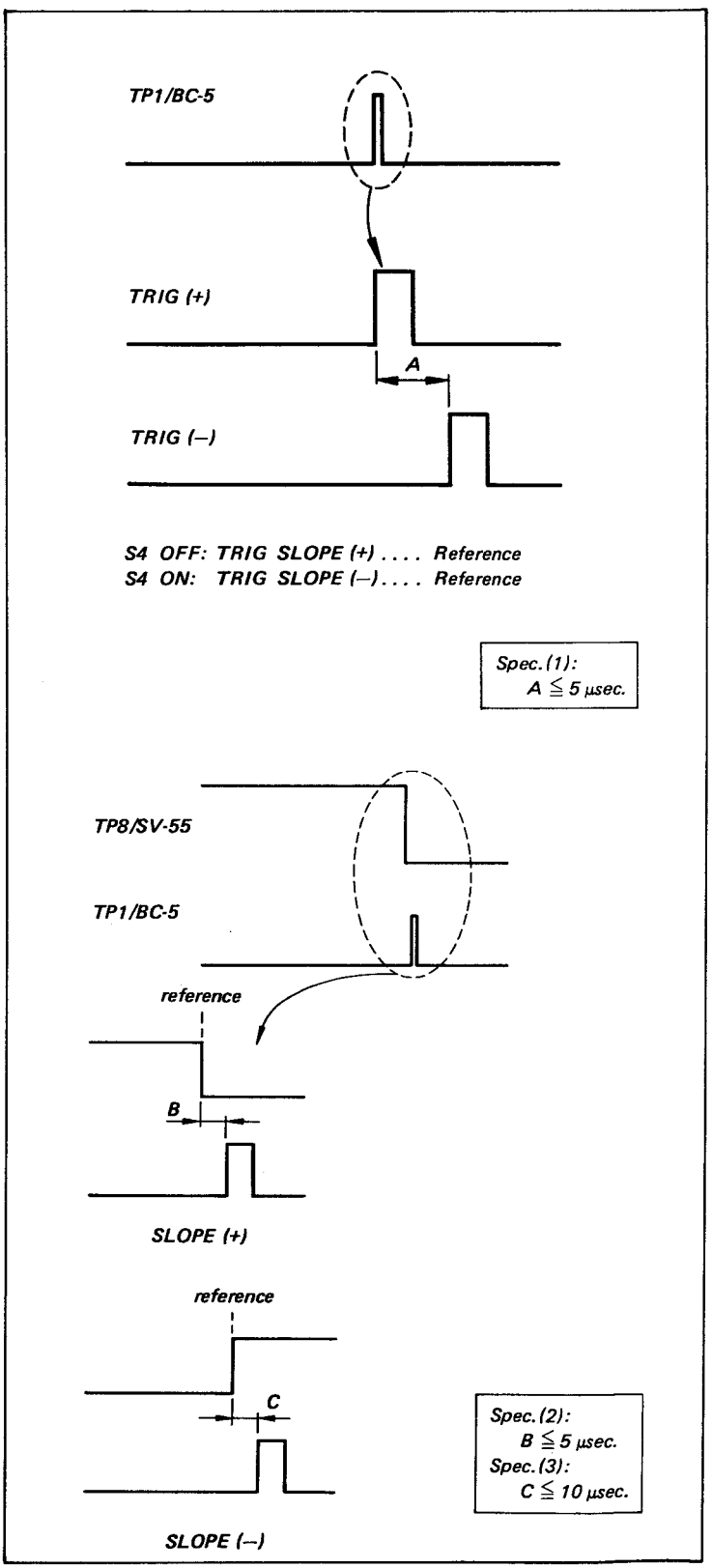
(4) When the specifications (1), (2) and (3) are met, remove the short clip.

Adjustment procedure:

For specification (1) ;

(1) Adjust SW3/BC-5 board to meet the specification (1).

. Adjust so that the time difference of the pulse is as little as possible.



. When it is not able to adjust by SW3, adjust SW3 after SW4/BC-5 board is changed to ON/OFF.

For specifications (2) and (3);

(2) Rough-adjust SW2/BC-5 board to meet the specifications (2) and (3). Fine-adjust with SW1.

9-8-5. C-Switching Position Adjustment

Mode: Playback the alignment tape

Tool: Alignment tape, CR2-1PS
Oscilloscope

Preparation:

(1) Remove the YC-14P board. Extend it with extension board.

(2) Short between the TP12/YC-14P board and E7/YC-14P board with short clip.

(3) Connect the oscilloscope as follows:
CH-1 : TP501/YC-14P board
EXT.TRIG : TP502/YC-14P board

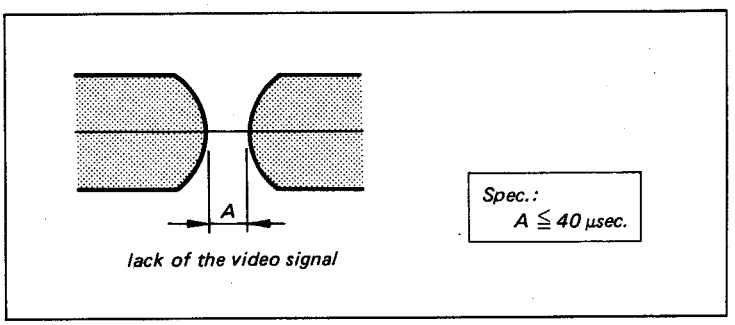
(4) Playback the alignment tape.

Check procedure:

(1) Turn the TRACKING volume in FIXED position.

(2) Check that the lack of signal meets the required specification by switching the TRIG.SLOPE of the oscilloscope.

(3) Remove the short clip.



9-9. CTL HEAD AZIMUTH/ZENITH ADJUSTMENT

Mode: Unthreading end

Tool: Cassette reference plate

Tension regulator slantness check tool

Check procedure:

(1) Install the cassette reference plate in the cassette position.

(2) Place the tension regulator slantness check tool at the CTL head as shown in figure. Check that the slantness of the CTL head meets the required specification.

Adjustment procedure:

When the zenith is out of spec.

(1) Loosen the fixing screw 1 turn.

(2) Adjust the zenith with adjusting screw (C) to meet the required specification.

(3) Tighten the fixing screw and check the azimuth and zenith.

. When the azimuth is out of spec.

(4) Loosen the fixing screw 1 turn.

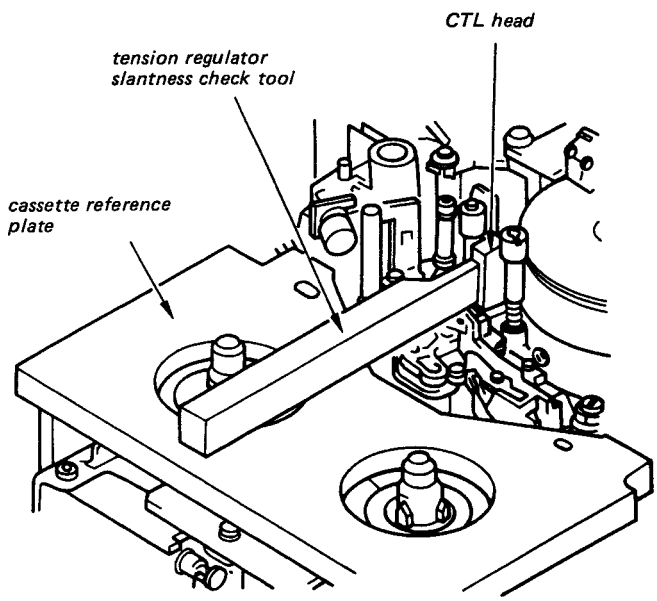
(5) Adjust the azimuth with adjusting screw (D) to meet the required specification.

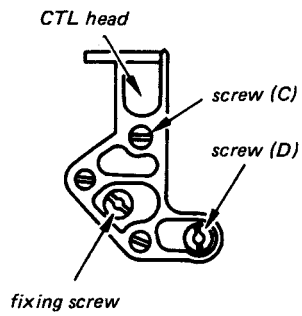
(6) Tighten the fixing screw and check the azimuth and zenith.

(7) After adjustment, perform the following adjustment.

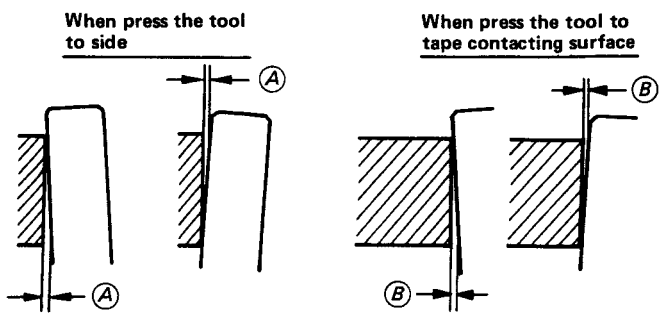
Sec.9-10, CTL Head Height Adjustment

Sec.9-5, CTL Head Position Adjustment





Spec.:
A ≦ 0.1 mm
B ≦ 0.1 mm



9-10. CTL HEAD HEIGHT ADJUSTMENT

Mode: Playback the alignment tape

Tool: Alignment tape, CR5-1PS
Oscilloscope

Preparation:

(1) Remove the SV-55P board. Extend it with extension board.

(2) Connect the oscilloscope as follows:
CH-1 : TP13/SV-55P board
TRIG : INTERNAL, CH-1

(3) Insert the alignment tape, and playback the audio 1kHz signal portion that is recorded on the CTL track of the alignment tape.

Check procedure:

(1) When pressing down and pushing up the tape at (A) portion, check that the both levels decrease. If the levels increase, the following adjustments are required.

Adjustment procedure:

. When the levels increase while pressing down the tape at (A) portion.

(1) Loosen the fixing screw 1 turn.

(2) Turn the adjusting screw (D) in the counterclockwise direction and turn the adjusting screws (C) and (B) an exactly equal amount in the clockwise direction. Adjust for maximum output waveform.

(3) Tighten the fixing screw and check again.

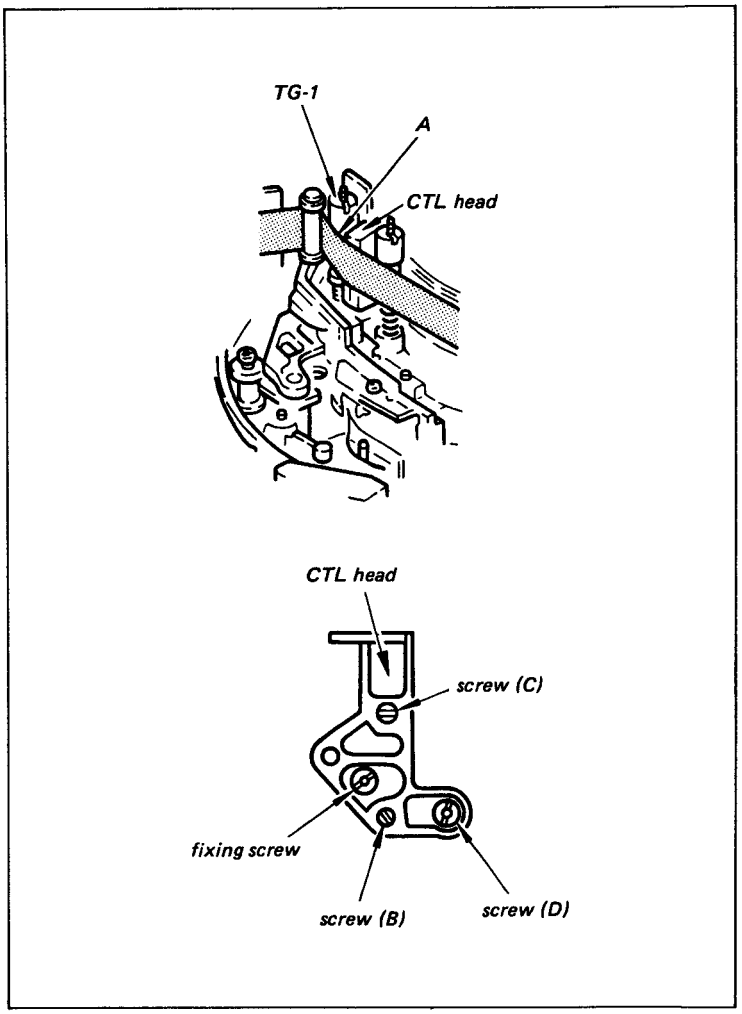
. When the levels increase while pushing up the tape at (A) portion.

(4) Loosen the fixing screw 1 turn.

(5) Turn the adjusting screw (D) in the clockwise direction and turn the adjusting screws (C) and (B) an exactly equal amount in the counterclockwise direction. Adjust the maximum output waveform.

(6) Tighten the fixing screw and check again.

(7) After adjustment, perform the following adjustment.
Sec.9-9, CTL Head Azimuth/Zenith Adjustment
Sec.9-5, CTL Head Position Adjustment



9-11. AUDIO/TC HEAD ZENITH ADJUSTMENT

Mode: Unthreading end

Tool: Flatness plate

Check procedure:

(1) Check that the clearance between the head and the flatness plate meets the required specification, when the flatness plate is set on the erase head and the TG-3.

Adjustment procedure:

If there is a clearance at the bottom portion.

(1) Loosen the fixing screw 1/4 to 1 turn.

(2) Turn the zenith adjusting screw (R) in the clockwise direction to meet the required specification.

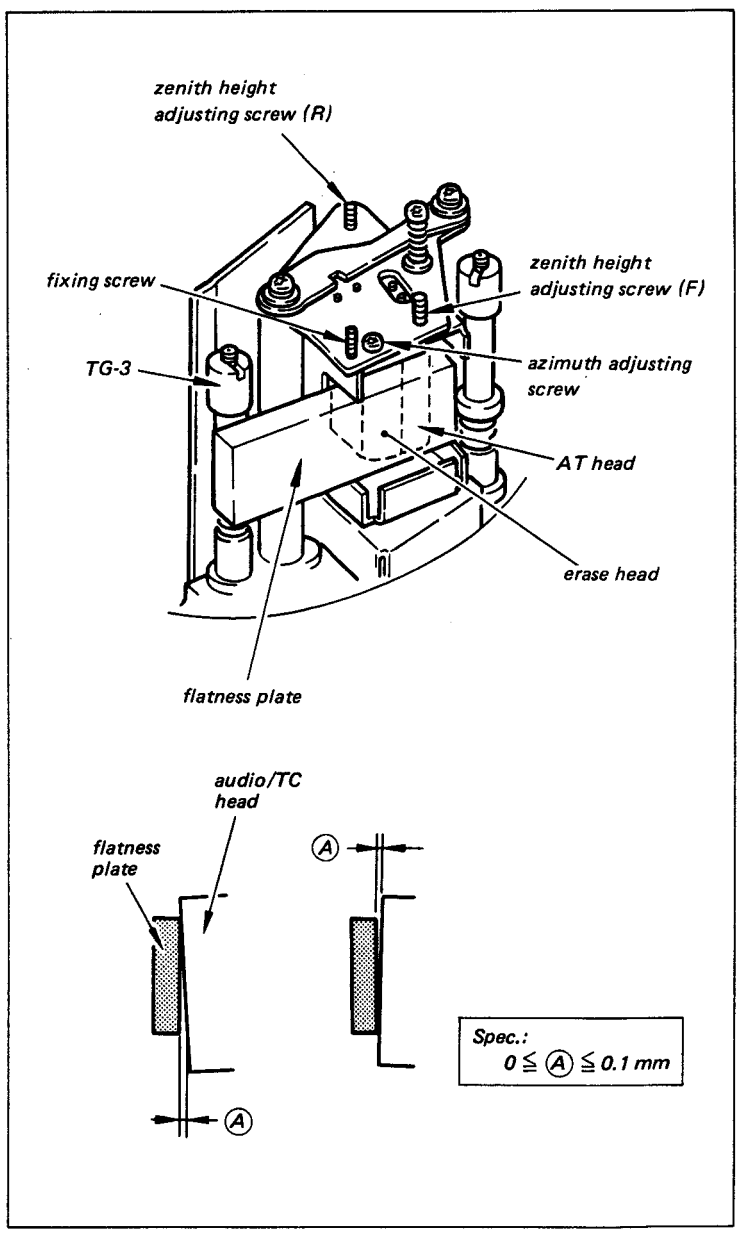
(3) Tighten the fixing screw and check again.

If there is a clearance at the top portion.

(4) Loosen the fixing screw 1/4 to 1 turn.

(5) Turn the zenith adjusting screw (R) in the counterclockwise direction to meet the required specification.

(6) Tighten the fixing screw and check again.



9-12. AUDIO HEAD HEIGHT ADJUSTMENT

Mode: Playback the alignment tape

Tool: Alignment tape,CR5-1PS
Dual trace oscilloscope or VTVM

Preparation:

(1) Connect the oscilloscope or VTVM to the AUDIO OUT CH-1 and CH-2.

(2) Playback the audio 1kHz signal portion of the alignment tape.

Check procedure:

(1) When pressing down the tape at (a) portion, check that the level decreases.

(2) When pushing up the tape at (b) portion, check that the level decreases.

Adjustment procedure:

. When the level increase while pressing down the tape at (a) portion.

(1) Loosen the fixing screw 2 to 3 turns.

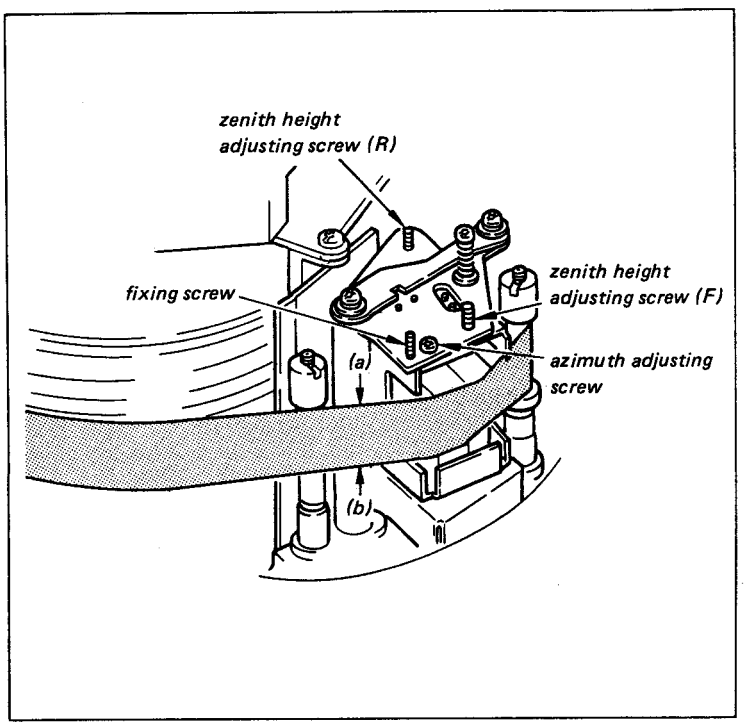
(2) Turn the zenith adjusting screws (R) and (F) in the counterclockwise direction and turn the azimuth height adjusting screw an exactly equal amount in the clockwise direction. Adjust for maximum output waveform.

(3) Tighten the fixing screw and check again.

. When the level increases while pushing up the tape at (b) portion.

(4) Turn the zenith adjusting screws (R) and (F) in the clockwise direction and turn the azimuth height adjusting screw an exactly equal amount in the counterclockwise direction. Adjust for maximum output waveform.

(5) Tighten the fixing screw and check again.



9-13. AUDIO HEAD PHASE ADJUSTMENT

Mode: Playback tha alignment tape

Tool: Alignment tape, CR5-1PS
Dual trace oscilloscope

Preparation:

(1) Connect the horizontal and vertical terminals of the oscilloscope to AUDIO OUT CH-1 and CH-2 terminals.

(2) Playback the audio 10kHz portion of the alignment tape.

(3) Adjust the scope for horizontal and vertical amplitudes of 6cm of a lissajous waveshape.

Check procedure:

(1) Check that the vertical amplitude at the center in the horizontal direction is within the specification.

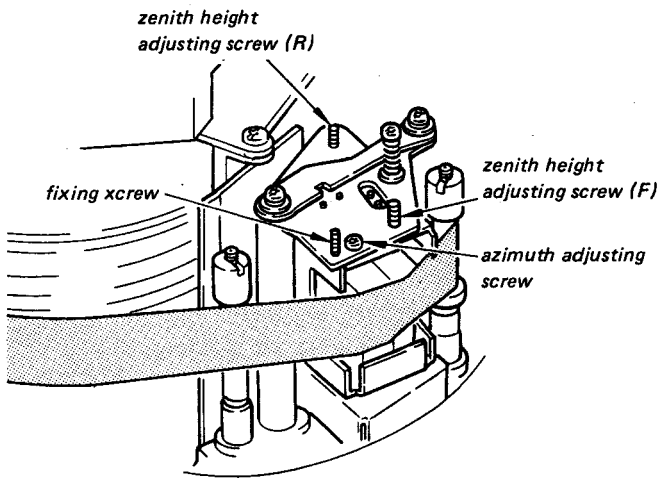
(2) The lissajous waveshape meets the required specification at 1kHz.

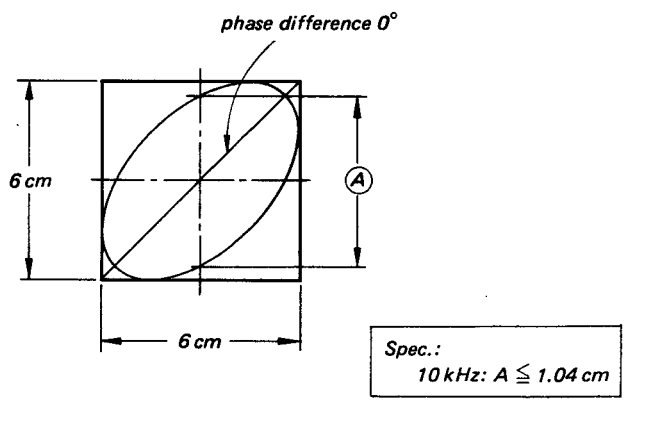
Adjustment procedure:

(1) Loosen the fixing screw 1/4 to 1/2 turn.

(2) Turn the azimuth height adjusting screw to meet the required specification.

(3) Tighten the fixing screw and check again.





9-14. PINCH ROLLER PRESSURE TIMING ADJUSTMENT

. This adjustment is closely related with the accuracy of the tape-to-tape editing.
Therefore, this adjustment should be attempted carefully, and deliberately.

Tool: Oscilloscope

Preparation:

(1) Remove the SY-4 board. Extend it with extension board.

(2) Connect the oscilloscope as follows:
CH-1 : TP2/SY-4 board
CH-2 : TP3/SY-4 board

Check procedure:

(1) Press the STOP button.

(2) Press the PLAY button. Check that waveform meets the required specification.

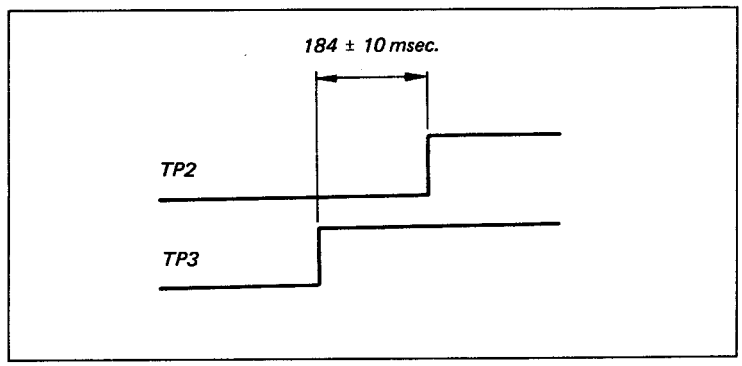
Adjustment procedure:

(1) Adjust RV1 on SY-4 board to meet the required specification.

(Note)

The following procedure is easy to meet the pinch roller pressure timing of two VTRs.

(1) Perform the editing operation (INSERT) with two VTRs. Hear the pressure sounds of the pinch solenoids and adjust the same timing of pressure sounds by RV1/SY-4 at a VTR.



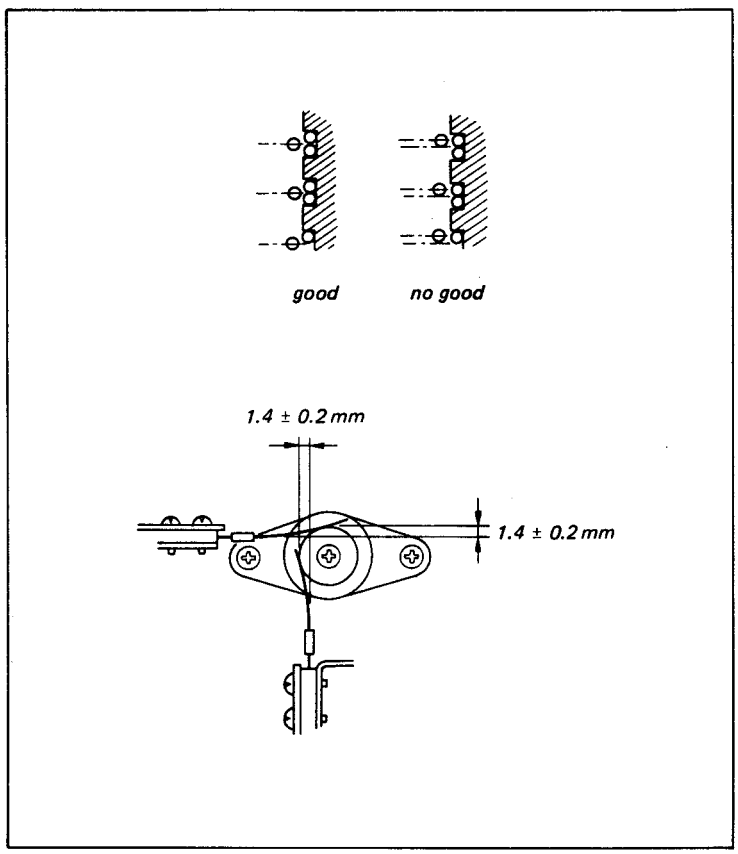
9-15. SLIP-RING AND BRUSH POSITION ADJUSTMENT

Adjustment procedure:

(1) Loosen the fixing screws of the brush block and disengage the brush from the slip-ring. Tighten the fixing screws.

(2) Adjust the height of the brush so that the brush is positioned in the center of the two rings.

(3) Loosen the fixing screws of the brush block again. Adjust the position of the brush to meet the specification.



9-16. FULL ERASE HEAD TAPE-TO-HEAD CONTACT ADJUSTMENT

Tool: Audio oscillator
VTVM

Preparation:

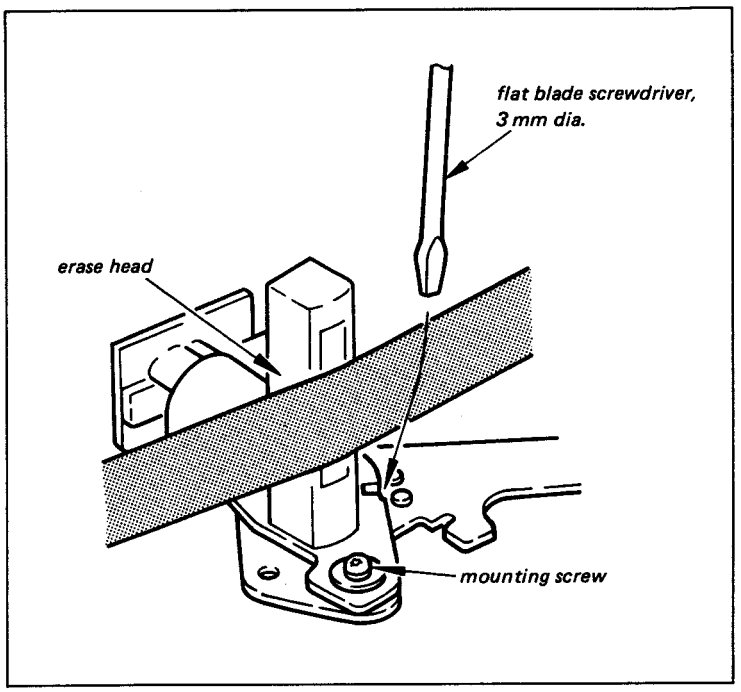
(1) Connect the audio oscillator to AUDIO IN CH-1/CH-2 on the connector panel.
(2) Connect the VTVM to AUDIO OUT CH-1/CH-2 on the connector panel.

Check procedure:

(1) Record the 1kHz, +10dB signal about 30 seconds.
(2) Set the tape to REW.
(3) Turn the power off.
Extend the DR-21P board with extension board. Short between TP204 and E202, and between TP205 and E202 with two jumper leads. (Operate the bias of the full erase head forcibly.)
(4) Turn the power on in the playback mode. Check that the VTVM level meets the required specification.
(Caution)
Since the full erase head is away from the audio head on the tape path, it takes about four seconds untill the erased portion by full erase head reaches to the audio head.
(5) If the specification is met, remove the two jumper leads on DR-21P board.

Adjustment procedure:

(1) If the specification is not met, perform the check procedures (1) to (3) after remove the jumper leads of DR-21P board.
(2) Put the machine into the playback mode. Adjust the position of the erase head block.
(Caution)
It takes about 4 seconds to get a result after moving the erase head block as above mentioned in check procedure (4).
(3) After adjustment, remove the two leads on DR-21P board.
(4) After adjustment, perform Sec. 7-7. End Sensor Position Adjustment (the tape end sensor).



SONY - SP0103

SONY

VIDEOCASSETTE RECORDER

BVW-40P



BETACAM™

OPERATION AND MAINTENANCE MANUAL

Volume 2 3rd Edition

Serial No. 12170 and Higher

EBU N-10 LEVEL

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Hinweis
Dieses Gerät erfüllt bezüglich Störstrahlungsunterdrückung die EEC-Richtlinien 76/889 und 82/499.

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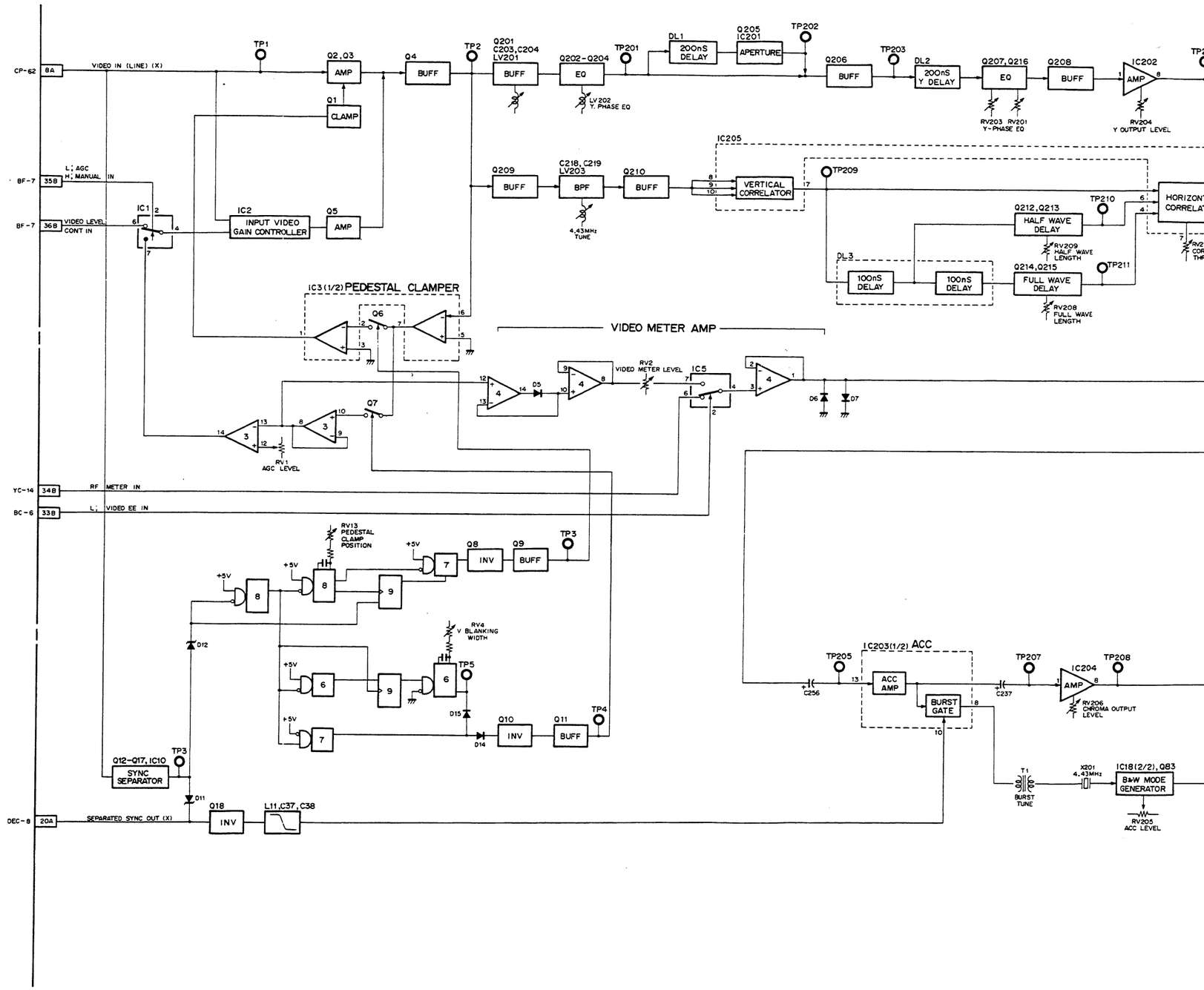
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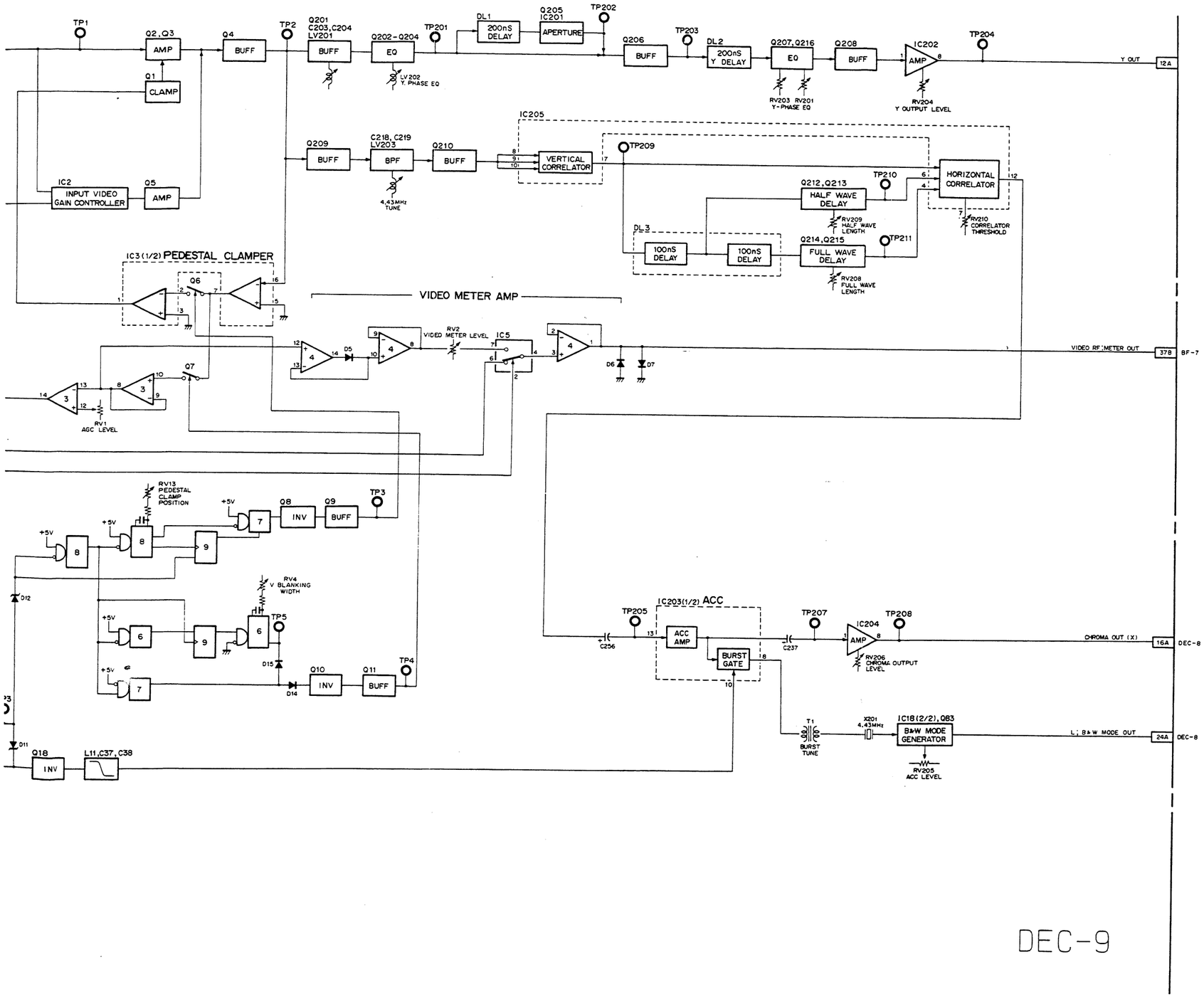
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19-5. Fixture (Optional) 19-93

SECTION 16
BLOCK DIAGRAMS

Y/C SEPARATOR

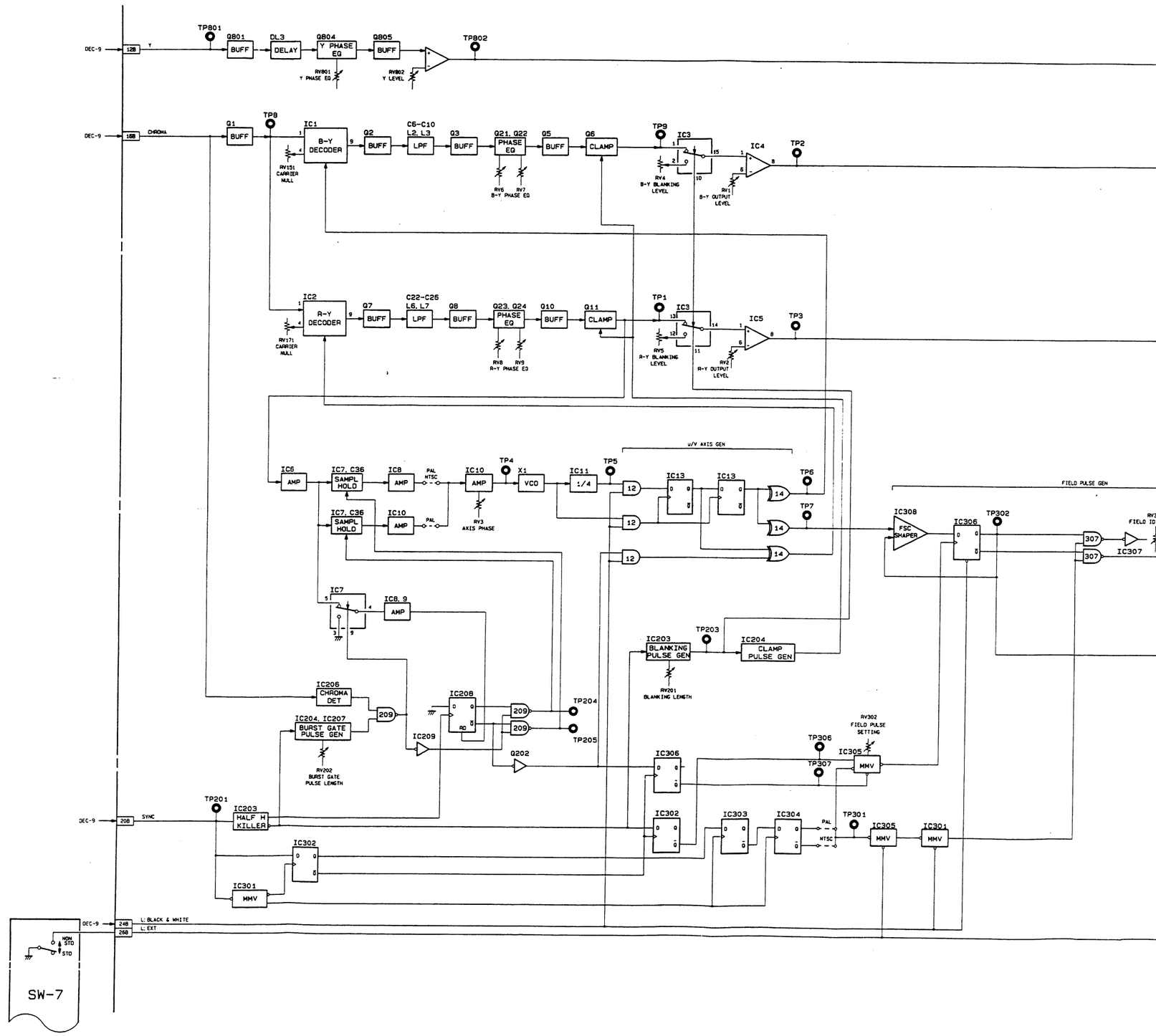


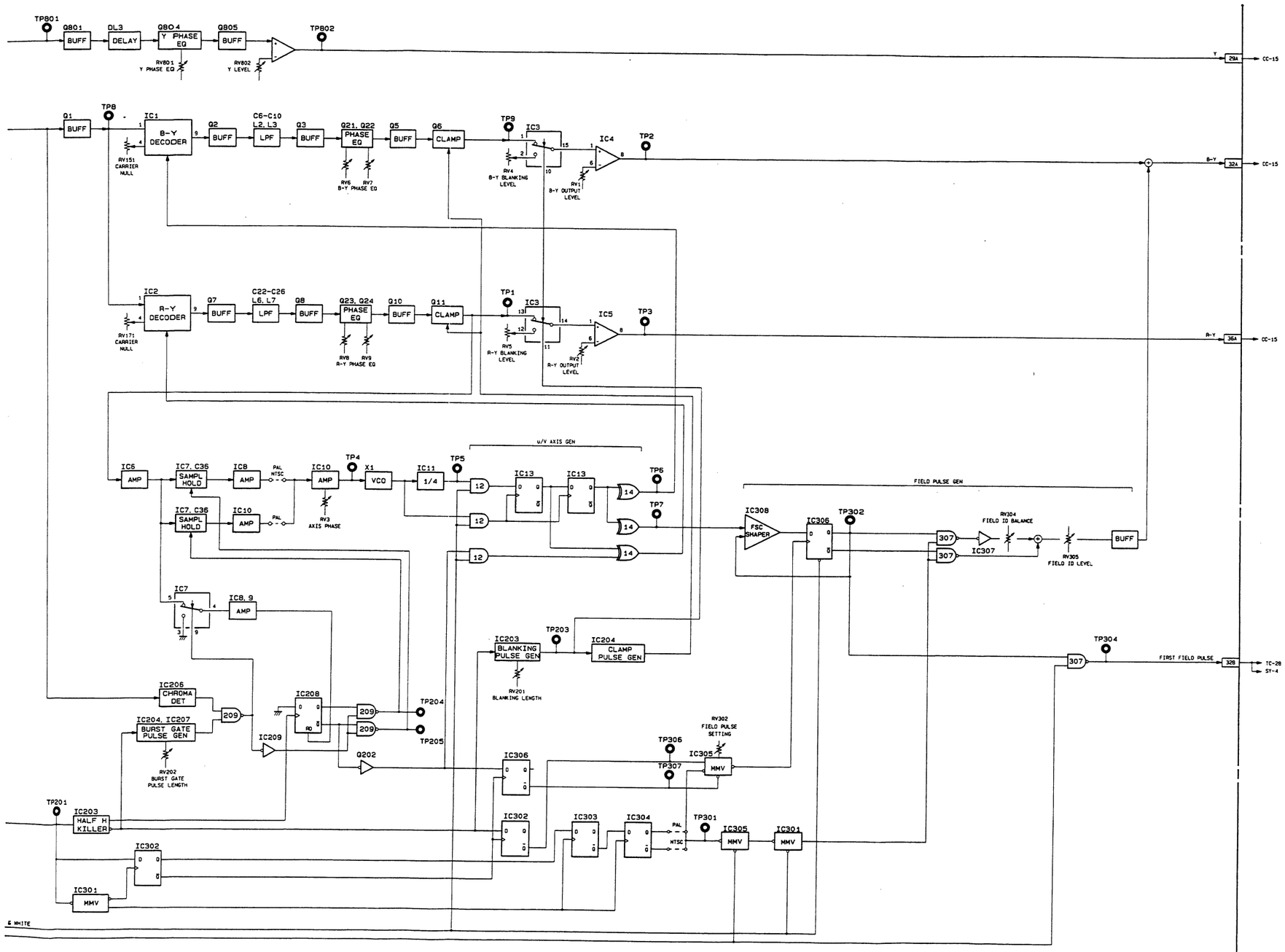

TP1
Q2,Q3
AMP
Q1
CLAMP
Q4
BUFF
TP2
Q201
C203,C204
LV201
BUFF
Q202-Q204
EQ
LV202
Y PHASE EQ
TP201
DL1
200nS
DELAY
Q205
IC201
APERTURE
TP202
Q206
BUFF
TP203
DL2
200nS
Y DELAY
Q207,Q216
EQ
RV203 RV201
Y-PHASE EQ
Q208
BUFF
IC202
AMP
RV204
Y OUTPUT LEVEL
TP204
Y OUT
12A
IC205
Q209
BUFF
C218,C219
LV203
BPF
4.43MHz
TUNE
Q210
BUFF
VERTICAL
CORRELATOR
TP209
TP210
Q212,Q213
HALF WAVE
DELAY
RV209
HALF WAVE
LENGTH
HORIZONTAL
CORRELATOR
RV210
CORRELATOR
THRESHOLD
DL3
100nS
DELAY
100nS
DELAY
Q214,Q215
FULL WAVE
DELAY
TP211
RV208
FULL WAVE
LENGTH
IC2
INPUT VIDEO
GAIN CONTROLLER
Q5
AMP
IC3(1/2) PEDESTAL CLAMPER
Q6
VIDEO METER AMP
RV2
VIDEO METER LEVEL
IC5
D5
Q7
RV1
AGC LEVEL
D6
D7
VIDEO RF METER OUT
37B
8F-7
RV13
PEDESTAL
CLAMP
POSITION
+5V
Q8
INV
Q9
BUFF
TP3
RV4
V BLANKING
WIDTH
TP5
D12
D15
D14
Q10
INV
Q11
BUFF
TP4
D11
Q18
INV
L11,C37,C38
TP205
IC203(1/2) ACC
ACC
AMP
BURST
GATE
C256
C237
TP207
TP208
IC204
AMP
RV206
CHROMA OUTPUT
LEVEL
CHROMA OUT (X)
16A
DEC-8
T1
BURST
TUNE
X201
4.43MHz
IC18(2/2),Q83
B&W MODE
GENERATOR
RV205
ACC LEVEL
L; B&W MODE OUT
24A
DEC-8

DEC-9

VIDEO DECODER

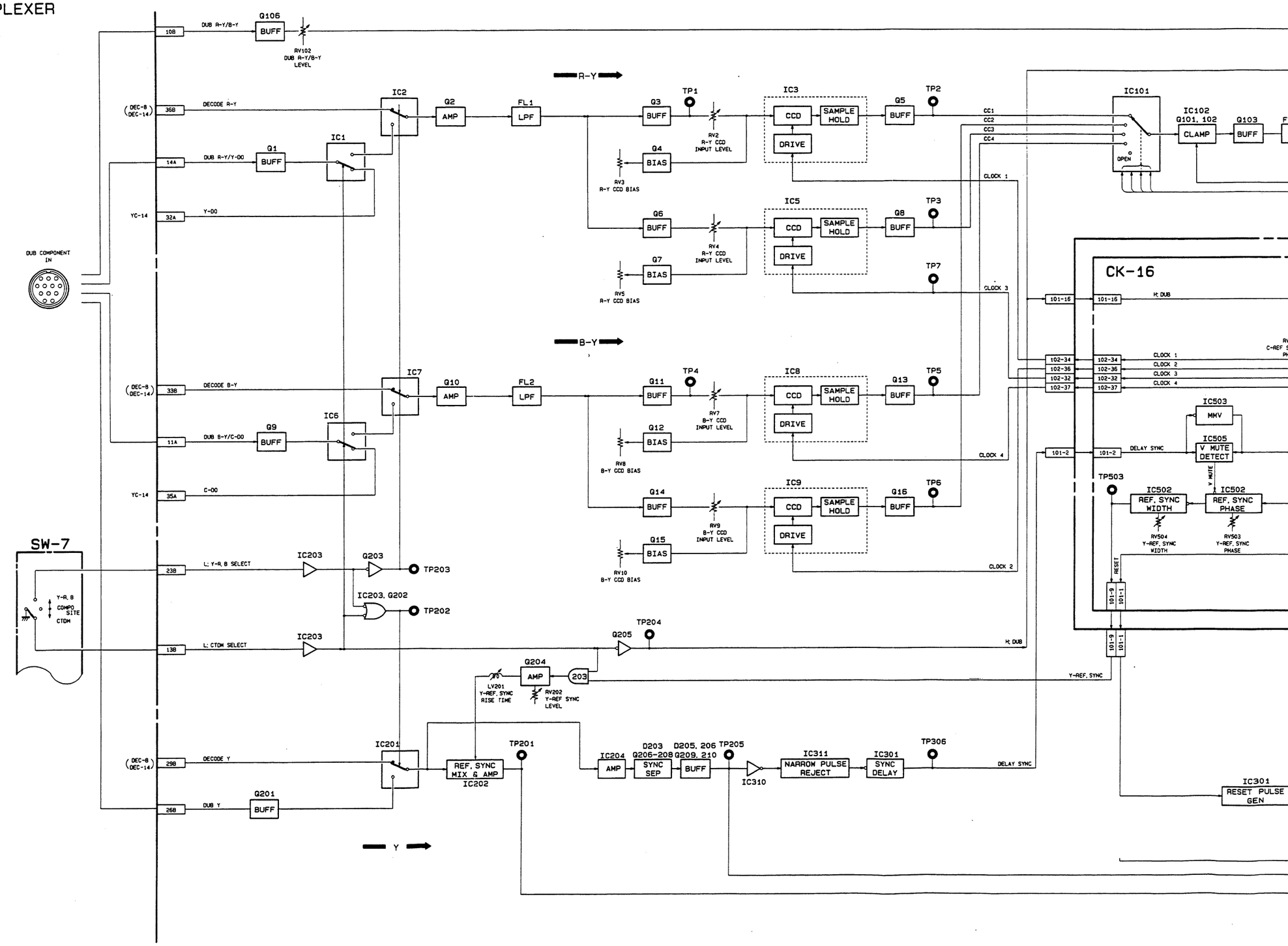
VIDEO DECODER




TP801
Q801
BUFF
DL3
DELAY
Q804
Y PHASE EQ
RV801 Y PHASE EQ
Q805
BUFF
RV802 Y LEVEL
TP802
Y
29A
CC-15
Q1
BUFF
TP8
IC1
B-Y DECODER
RV151 CARRIER NULL
Q2
BUFF
C6-C10 L2, L3
LPF
Q3
BUFF
Q21, Q22 PHASE EQ
RV6 B-Y PHASE EQ
RV7
Q5
BUFF
Q6
CLAMP
TP9
IC3
RV4 B-Y BLANKING LEVEL
IC4
TP2
RV1 B-Y OUTPUT LEVEL
B-Y
32A
CC-15
IC2
R-Y DECODER
RV171 CARRIER NULL
Q7
BUFF
C22-C26 L6, L7
LPF
Q8
BUFF
Q23, Q24 PHASE EQ
RV8 R-Y PHASE EQ
RV9
Q10
BUFF
Q11
CLAMP
TP1
IC3
RV5 R-Y BLANKING LEVEL
IC5
TP3
RV2 R-Y OUTPUT LEVEL
R-Y
36A
CC-15
U/V AXIS GEN
IC6
AMP
IC7, C36
SAMPL HOLD
IC8
AMP
PAL NTSC
IC10
AMP
RV3 AXIS PHASE
TP4
X1
VCO
IC11
1/4
TP5
12
IC13
IC13
TP6
14
TP7
IC7, C36
SAMPL HOLD
IC10
AMP
PAL
IC7
IC8, 9
AMP
FIELD PULSE GEN
IC308
FSC SHAPER
IC306
TP302
307
307
IC307
RV304 FIELD ID BALANCE
RV305 FIELD ID LEVEL
BUFF
IC203
BLANKING PULSE GEN
RV201 BLANKING LENGTH
TP203
IC204
CLAMP PULSE GEN
TP304
307
FIRST FIELD PULSE
32B
TC-28
SY-4
IC206
CHROMA DET
IC204, IC207
BURST GATE PULSE GEN
RV202 BURST GATE PULSE LENGTH
209
IC208
RD
209
209
TP204
TP205
IC209
Q202
RV302 FIELD PULSE SETTING
TP306
TP307
IC305
MMV
IC306
TP201
IC203
HALF H KILLER
IC302
IC303
IC304
PAL
NTSC
TP301
IC305
MMV
IC301
MMV
IC302
IC301
MMV
6 WHITE

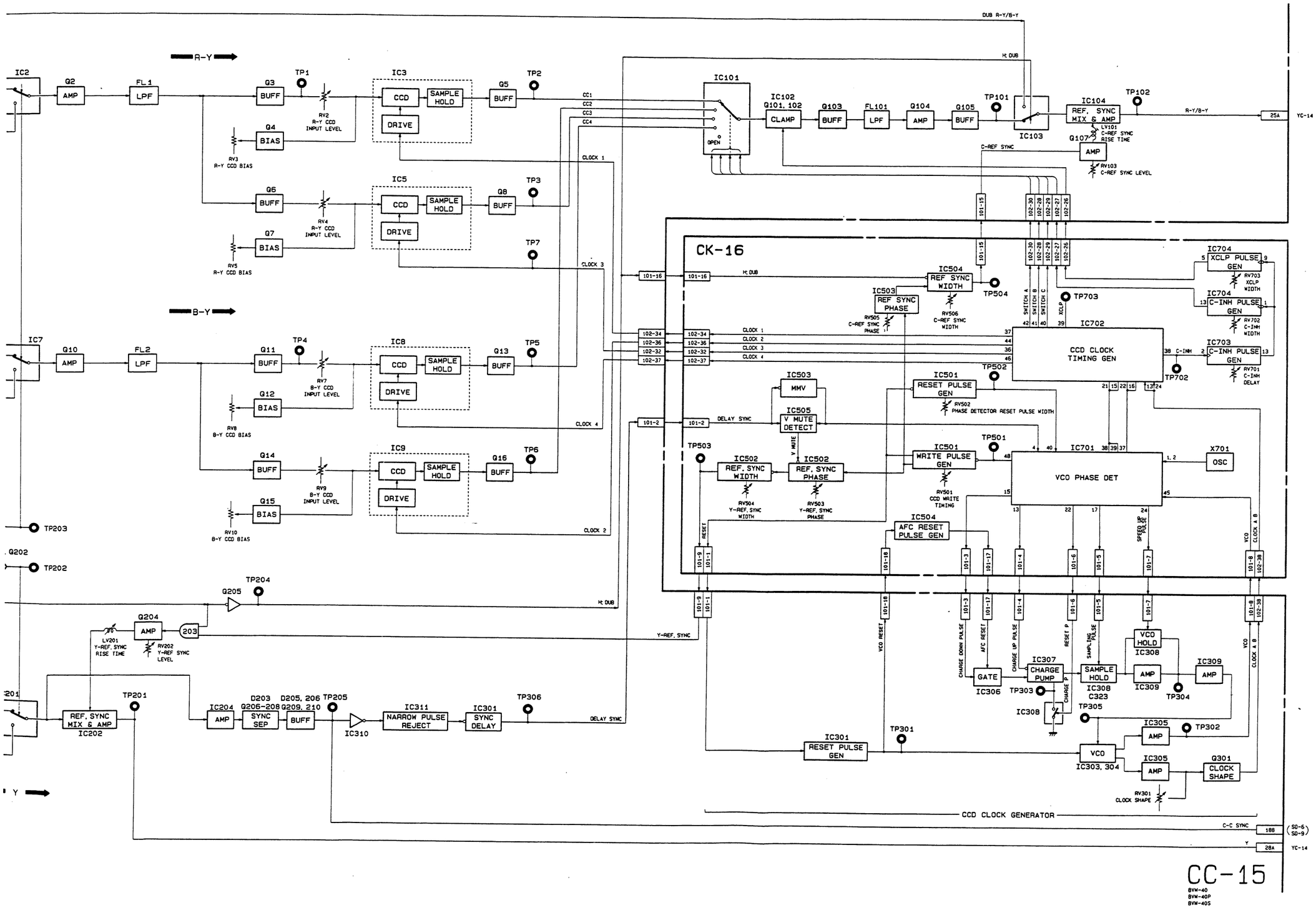
DEC-8

CHROMA TIME DIVISION MULTIPLEXER CCD CLOCK TIMING GENERATOR

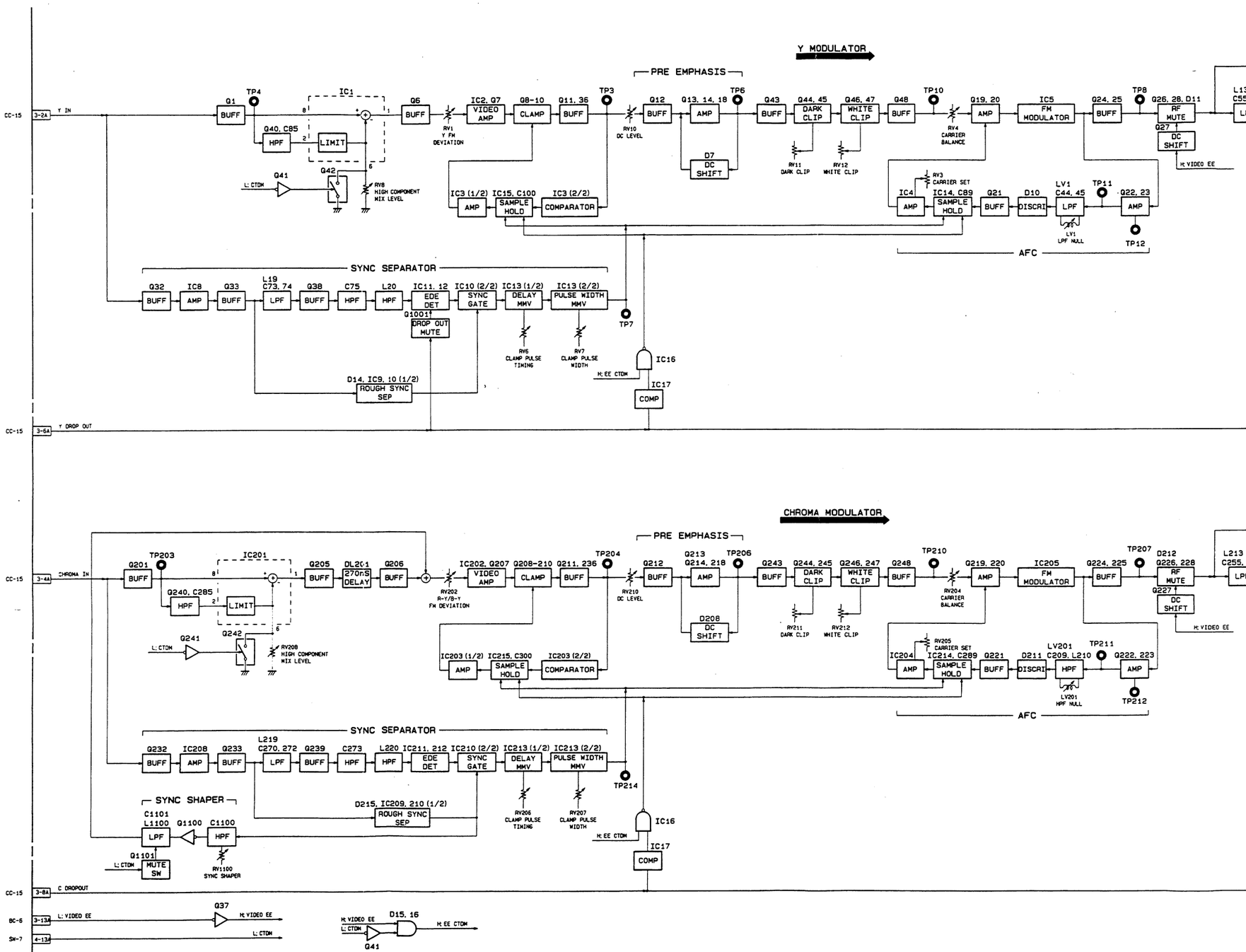


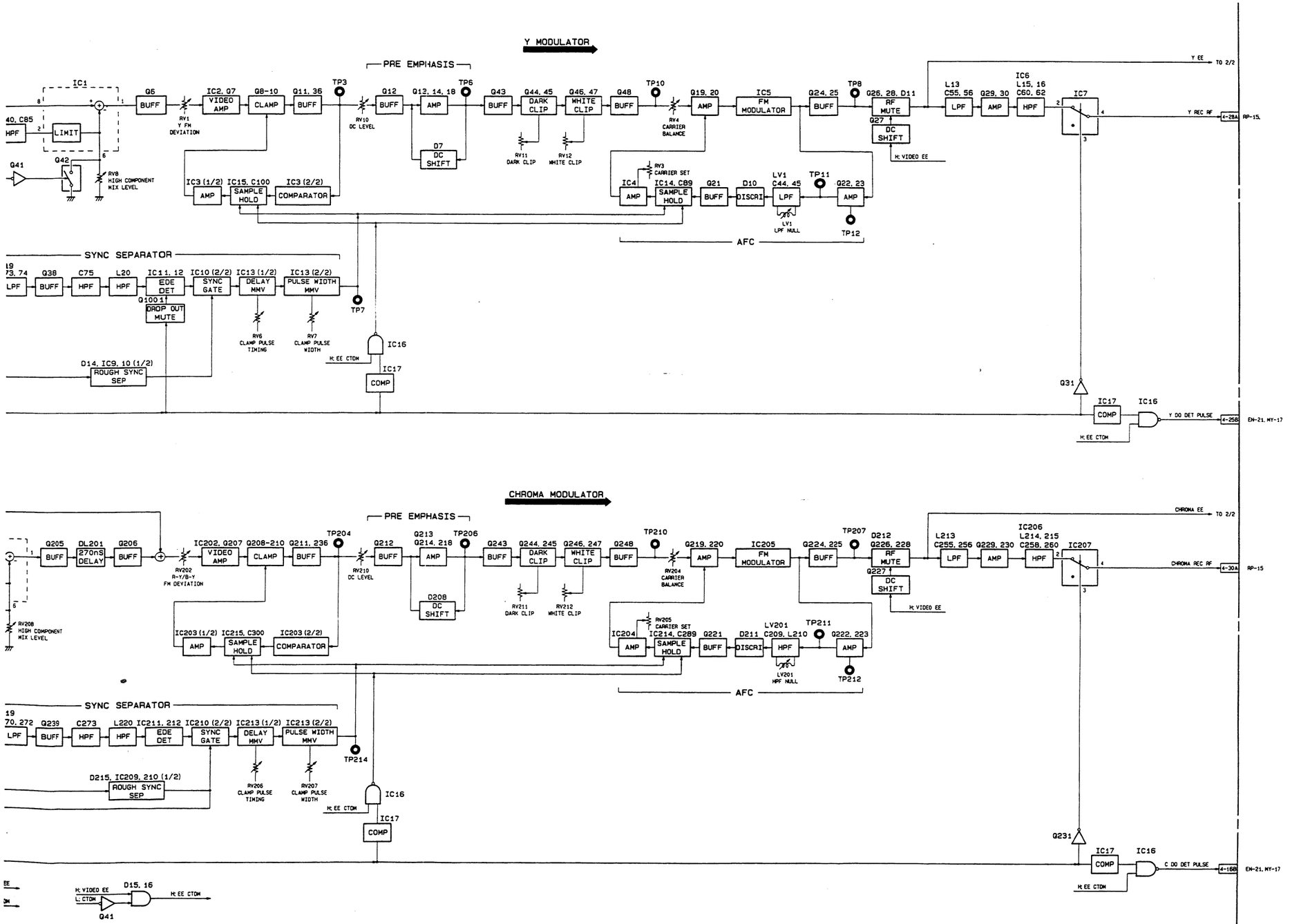
CTDM, CCD CLOCK TIMING GEN.

CTDM, CCD CLOCK TIMING GEN.



Y/C MODULATOR

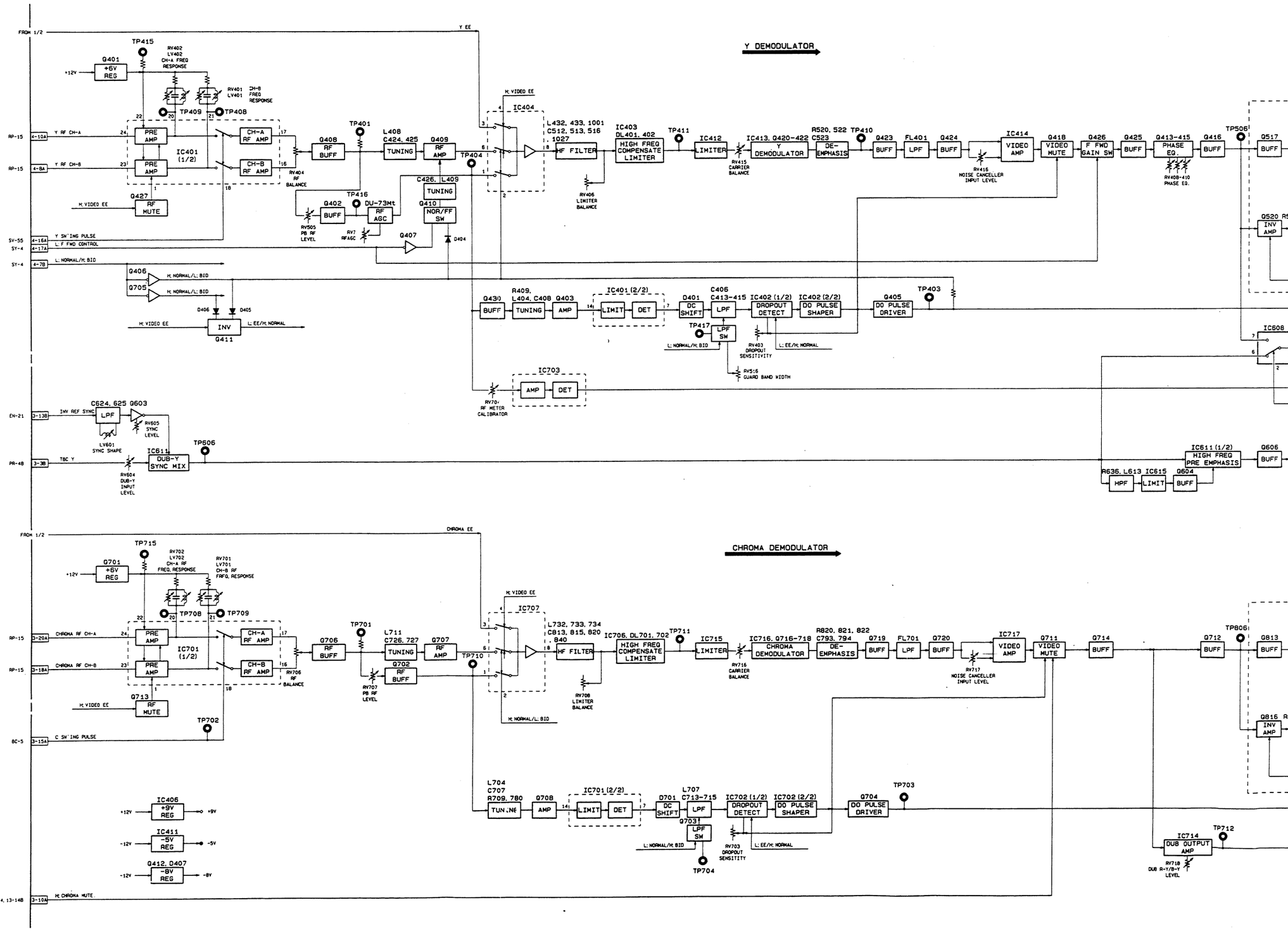



Y MODULATOR
PRE EMPHASIS
IC1
Q5 BUFF
RV1 Y FM DEVIATION
IC2, Q7 VIDEO AMP
Q8-10 CLAMP
Q11, 36 BUFF
TP3
RV10 DC LEVEL
Q12 BUFF
Q13, 14, 18 AMP
D7 DC SHIFT
TP6
Q43 BUFF
Q44, 45 DARK CLIP
Q46, 47 WHITE CLIP
RV11 DARK CLIP
RV12 WHITE CLIP
Q48 BUFF
TP10
RV4 CARRIER BALANCE
Q19, 20 AMP
IC5 FM MODULATOR
Q24, 25 BUFF
TP8
Q26, 28, D11 RF MUTE
Q27 DC SHIFT
H: VIDEO EE
Y EE
TO 2/2
L13 C55, 56 LPF
Q29, 30 AMP
IC6 L15, 16 C60, 62 HPF
IC7
Y REC RF
4-28A
RP-15
LIMIT
Q41
Q42
RV8 HIGH COMPONENT MIX LEVEL
IC3 (1/2) AMP
IC15, C100 SAMPLE HOLD
IC3 (2/2) COMPARATOR
RV3 CARRIER SET
IC4 AMP
IC14, C89 SAMPLE HOLD
Q21 BUFF
D10 DISCRI
LV1 C44, 45 LPF
LV1 LPF NULL
TP11
Q22, 23 AMP
TP12
AFC
SYNC SEPARATOR
Q38 BUFF
C75 HPF
L20 HPF
IC11, 12 EDE DET
IC10 (2/2) SYNC GATE
IC13 (1/2) DELAY MMV
IC13 (2/2) PULSE WIDTH MMV
Q100 DROP OUT MUTE
RV6 CLAMP PULSE TIMING
RV7 CLAMP PULSE WIDTH
TP7
D14, IC9, 10 (1/2) ROUGH SYNC SEP
H: EE CTDM
IC16
IC17 COMP
Q31
IC17 COMP
IC16
Y DO DET PULSE
4-25B
EN-21, MY-17
H: EE CTDM

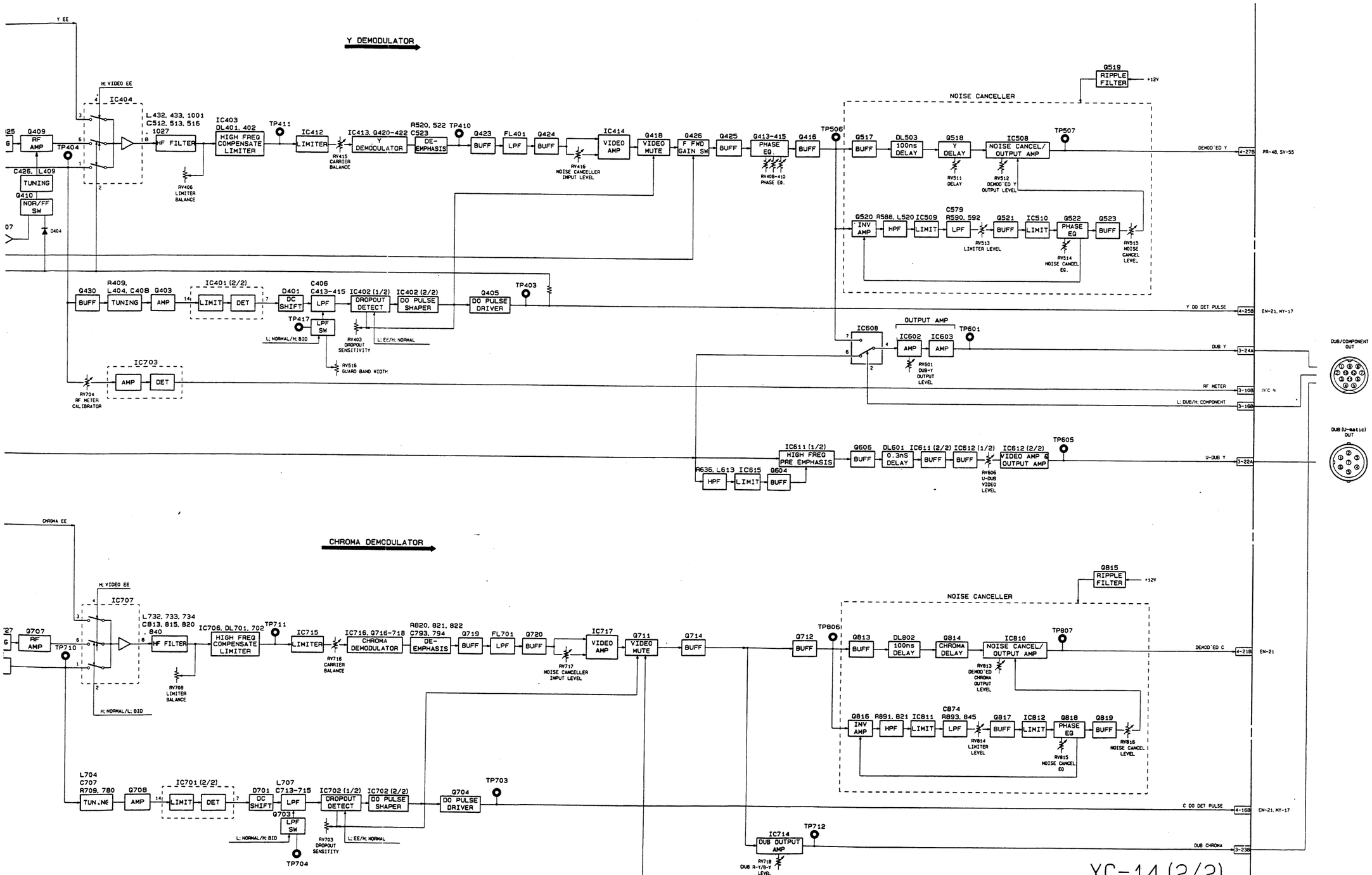
CHROMA MODULATOR
PRE EMPHASIS
Q205 BUFF
DL201 270nS DELAY
Q206 BUFF
RV202 R-Y/B-Y FM DEVIATION
IC202, Q207 VIDEO AMP
Q208-210 CLAMP
Q211, 236 BUFF
TP204
RV210 DC LEVEL
Q212 BUFF
Q213 Q214, 218 AMP
D208 DC SHIFT
TP206
Q243 BUFF
Q244, 245 DARK CLIP
Q246, 247 WHITE CLIP
RV211 DARK CLIP
RV212 WHITE CLIP
Q248 BUFF
TP210
RV204 CARRIER BALANCE
Q219, 220 AMP
IC205 FM MODULATOR
Q224, 225 BUFF
TP207
Q212 Q226, 228 RF MUTE
Q227 DC SHIFT
H: VIDEO EE
CHROMA EE
TO 2/2
L213 C255, 256 LPF
Q229, 230 AMP
IC206 L214, 215 C258, 260 HPF
IC207
CHROMA REC RF
4-30A
RP-15
RV208 HIGH COMPONENT MIX LEVEL
IC203 (1/2) AMP
IC215, C300 SAMPLE HOLD
IC203 (2/2) COMPARATOR
RV205 CARRIER SET
IC204 AMP
IC214, C289 SAMPLE HOLD
Q221 BUFF
D211 DISCRI
LV201 C209, L210 HPF
LV201 HPF NULL
TP211
Q222, 223 AMP
TP212
AFC
SYNC SEPARATOR
Q239 BUFF
C273 HPF
L220 HPF
IC211, 212 EDE DET
IC210 (2/2) SYNC GATE
IC213 (1/2) DELAY MMV
IC213 (2/2) PULSE WIDTH MMV
RV206 CLAMP PULSE TIMING
RV207 CLAMP PULSE WIDTH
TP214
D215, IC209, 210 (1/2) ROUGH SYNC SEP
H: EE CTDM
IC16
IC17 COMP
Q231
IC17 COMP
IC16
C DO DET PULSE
4-16B
EN-21, MY-17
H: EE CTDM
H: VIDEO EE
L: CTDM
D15, 16
H: EE CTDM
Q41

YC-14 (1/2)

Y/C DEMODULATOR



Y DEMODULATOR

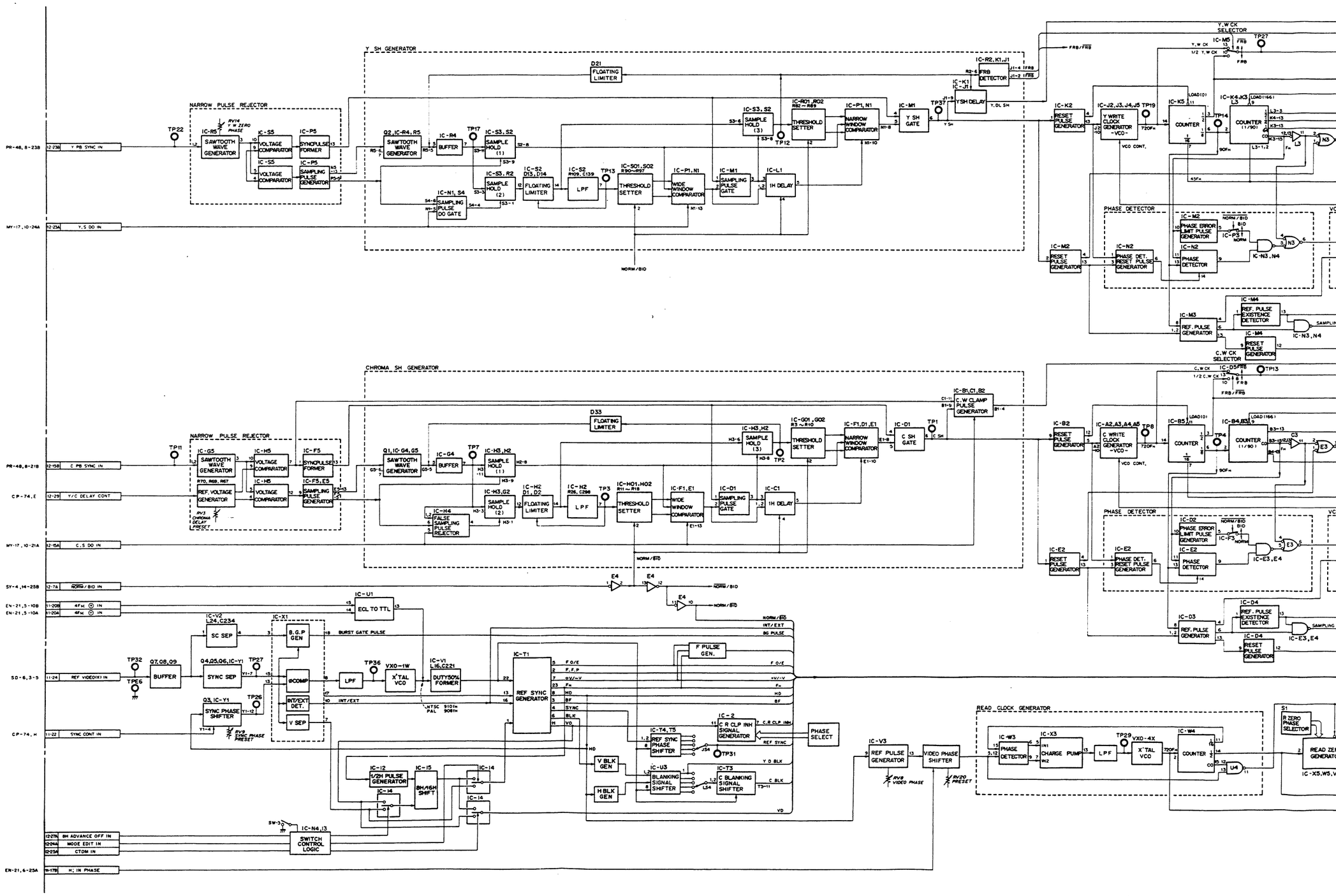


CHROMA DEMODULATOR

YC-14 (2/2)

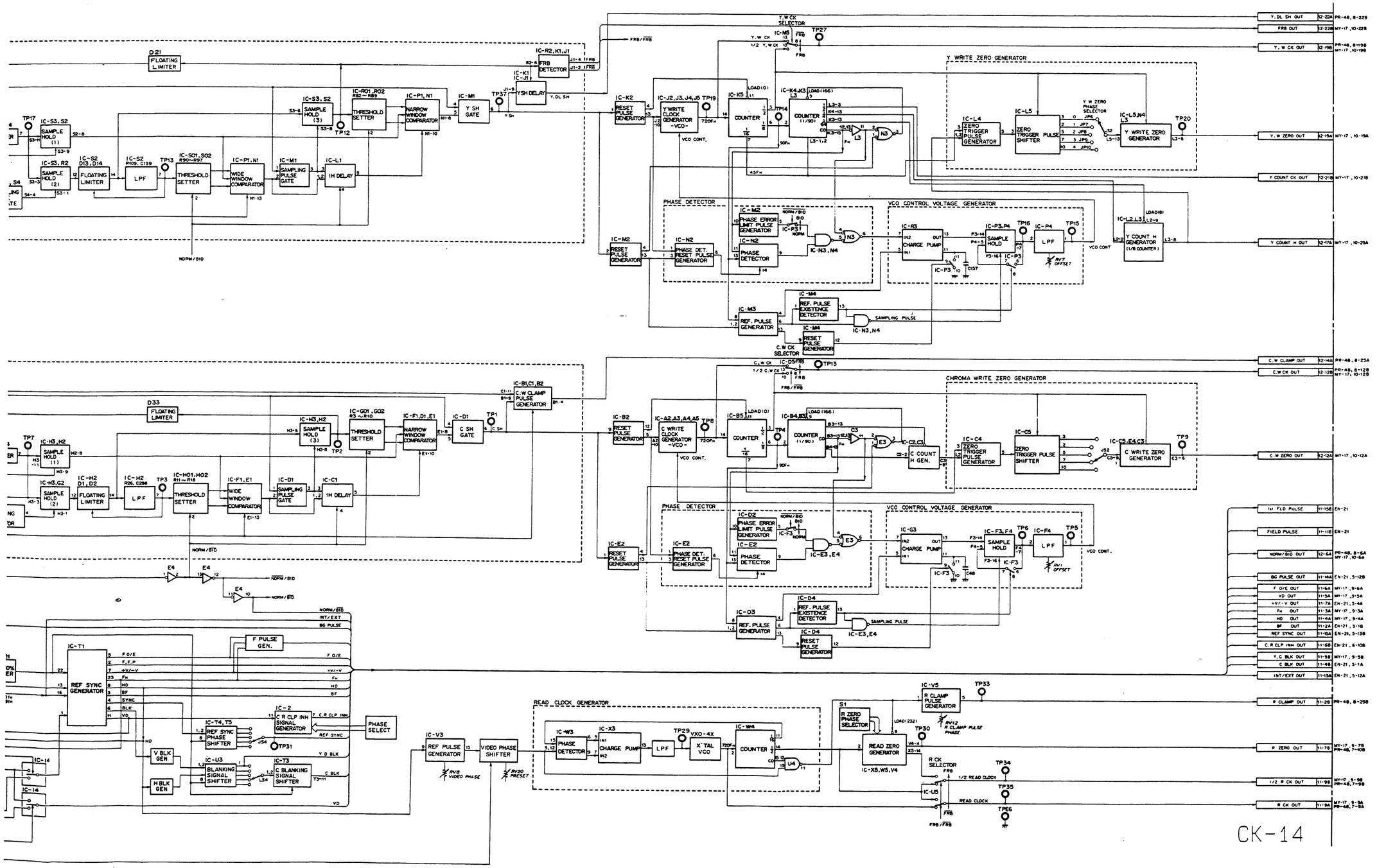
TBC TBC

VIDEO TBC, CK-14



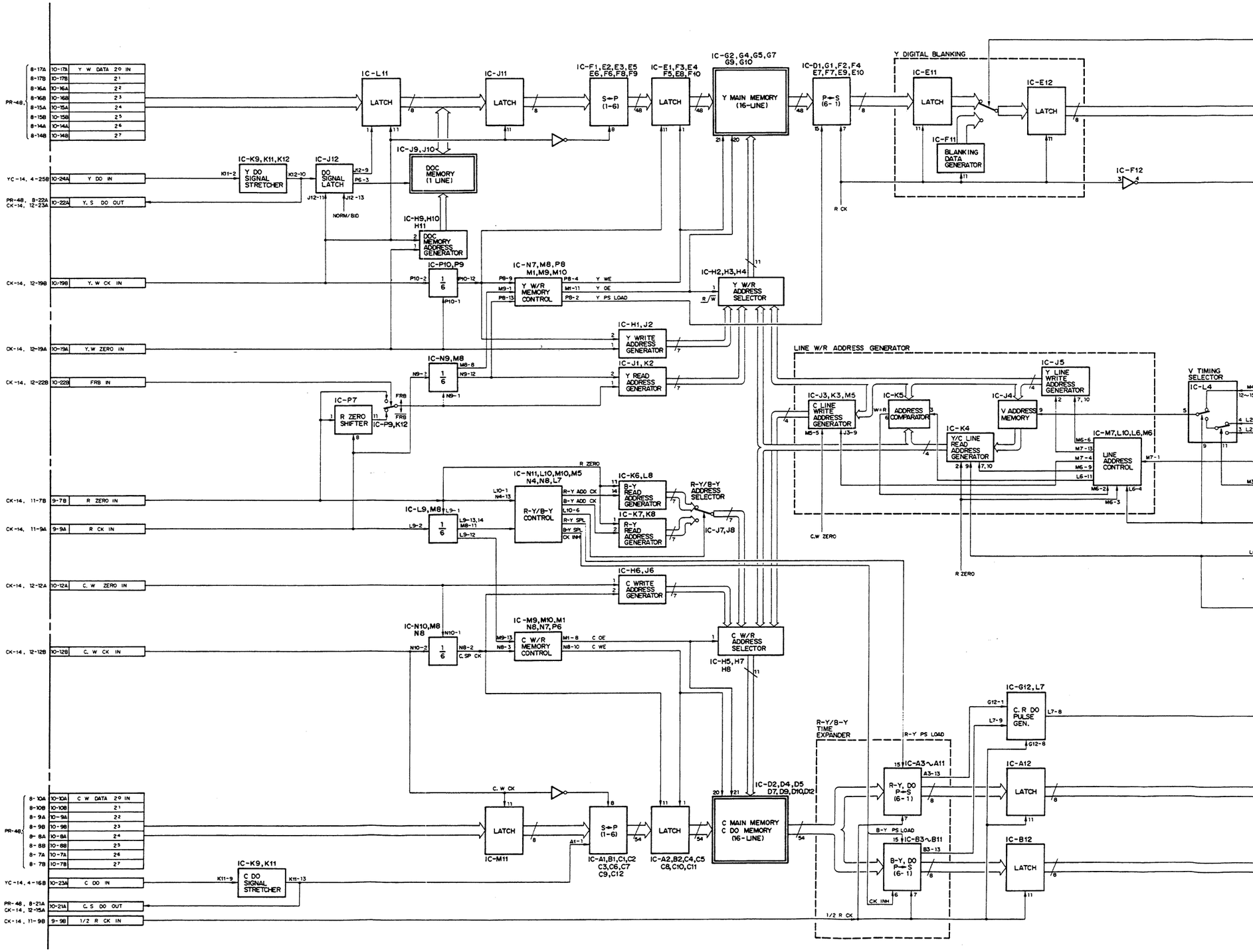
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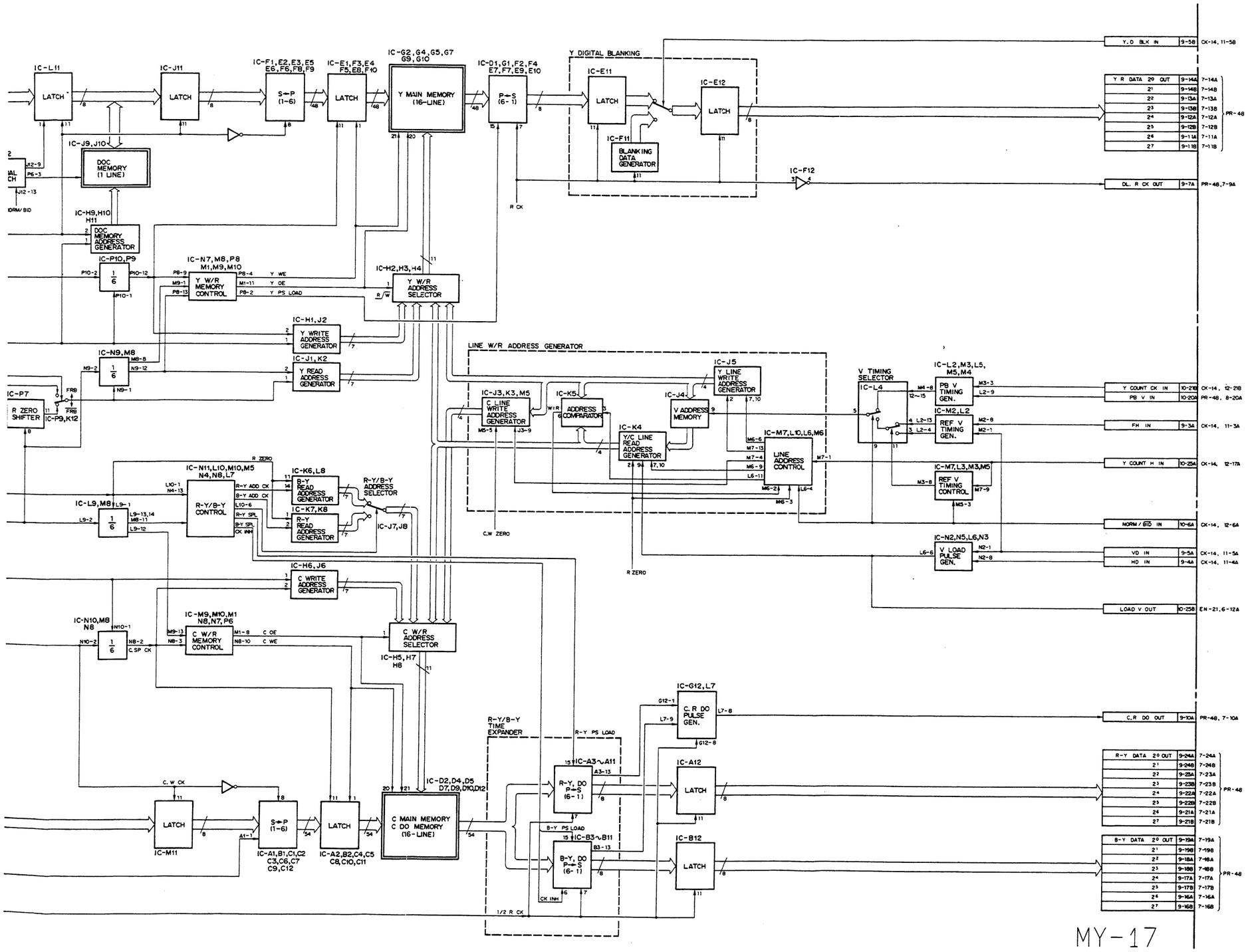


CK-14

VIDEO TBC, MY-17



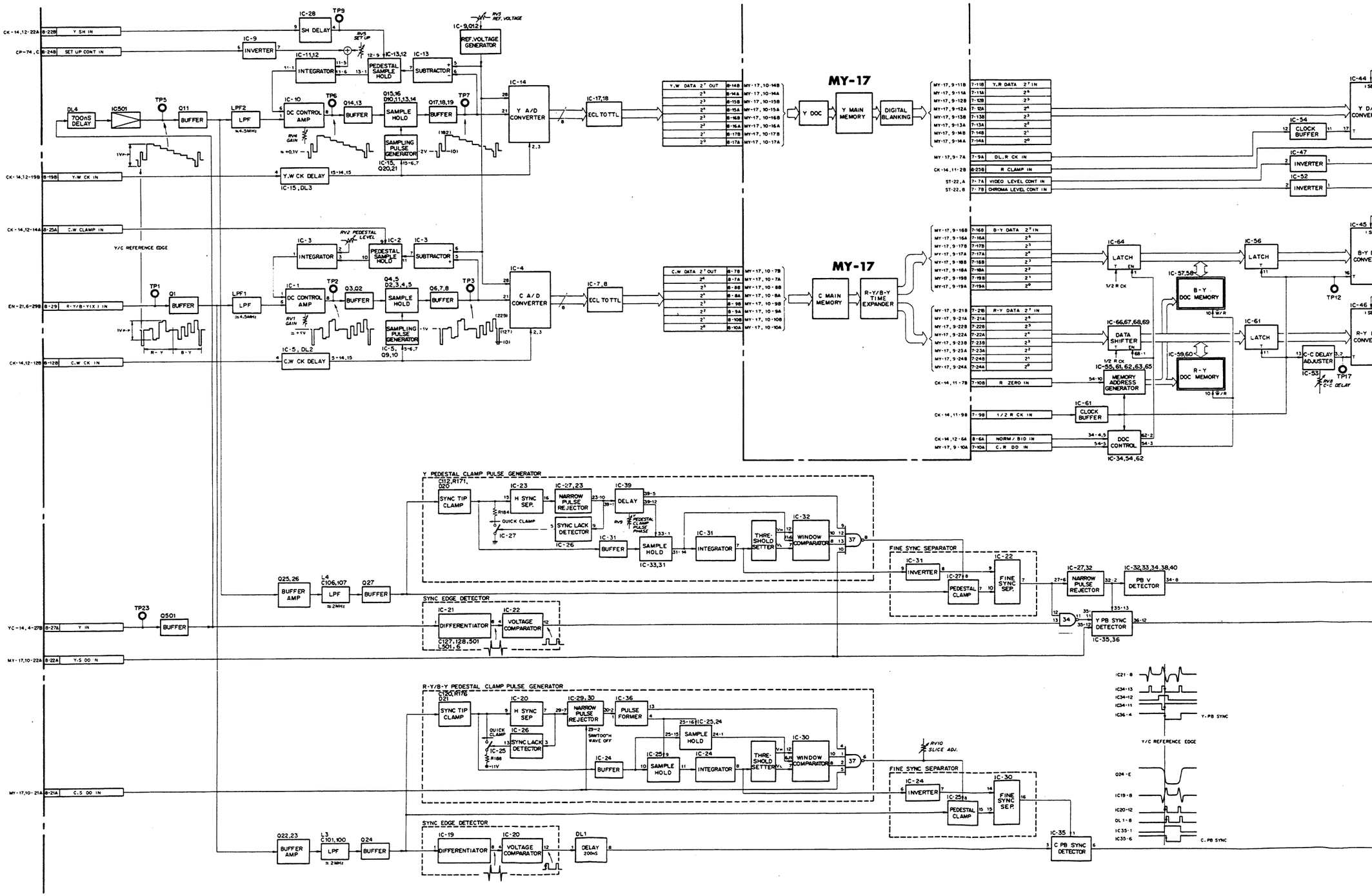
TBC TBC


IC-L11
LATCH
IC-J11
LATCH
IC-F1,E2,E3,E5 E6,F6,F8,F9
S→P (1-6)
IC-E1,F3,E4 F5,E8,F10
LATCH
IC-G2,G4,G5,G7 G9,G10
Y MAIN MEMORY (16-LINE)
IC-D1,G1,F2,F4 E7,F7,E9,E10
P→S (6-1)
Y DIGITAL BLANKING
IC-E11
LATCH
IC-E12
LATCH
IC-F11
BLANKING DATA GENERATOR
IC-F12
R CK
IC-J9,J10
DOC MEMORY (1 LINE)
IC-H9,H10 H11
DOC MEMORY ADDRESS GENERATOR
IC-P10,P9
1/6
IC-N7,M8,P8 M1,M9,M10
Y W/R MEMORY CONTROL
Y WE
Y OE
Y PS LOAD
IC-H2,H3,H4
Y W/R ADDRESS SELECTOR
R/W
IC-H1,J2
Y WRITE ADDRESS GENERATOR
IC-N9,M8
1/6
IC-J1,K2
Y READ ADDRESS GENERATOR
IC-P7
R ZERO SHIFTER
IC-P9,K12
FRB
FRG
LINE W/R ADDRESS GENERATOR
IC-J5
Y LINE WRITE ADDRESS GENERATOR
IC-J3,K3,M5
C LINE WRITE ADDRESS GENERATOR
IC-K5
ADDRESS COMPARATOR
W/R
IC-J4
V ADDRESS MEMORY
IC-K4
Y/C LINE READ ADDRESS GENERATOR
IC-M7,L10,L6,M6
LINE ADDRESS CONTROL
V TIMING SELECTOR
IC-L4
IC-L2,M3,L5, M5,M4
PB V TIMING GEN.
IC-M2,L2
REF V TIMING GEN.
IC-M7,L3,M3,M5
REF V TIMING CONTROL
IC-N2,N5,L6,N3
V LOAD PULSE GEN.
IC-N11,L10,M10,M5 N4,N8,L7
R-Y/B-Y CONTROL
R ZERO
R-Y ADD CK
B-Y ADD CK
R-Y SPL
B-Y SPL
CK INH
IC-K6,L8
B-Y READ ADDRESS GENERATOR
IC-K7,K8
R-Y READ ADDRESS GENERATOR
IC-J7,J8
R-Y/B-Y ADDRESS SELECTOR
IC-L9,M8
1/6
IC-H6,J6
C WRITE ADDRESS GENERATOR
IC-N10,M8 N8
1/6
C.SP CK
IC-M9,M10,M1 N8,N7,P6
C W/R MEMORY CONTROL
C OE
C WE
C W/R ADDRESS SELECTOR
IC-H5,H7 H8
C.W ZERO
R ZERO
IC-G12,L7
C.R DO PULSE GEN.
R-Y/B-Y TIME EXPANDER
R-Y PS LOAD
IC-A3~A11
R-Y, DO P→S (6-1)
IC-A12
LATCH
B-Y PS LOAD
IC-B3~B11
B-Y, DO P→S (6-1)
IC-B12
LATCH
CK INH
1/2 R CK
C.W CK
IC-M11
LATCH
IC-A1,B1,C1,C2 C3,C6,C7 C9,C12
S→P (1-6)
IC-A2,B2,C4,C5 C8,C10,C11
LATCH
IC-D2,D4,D5 D7,D9,D10,D12
C MAIN MEMORY C DO MEMORY (16-LINE)
Y.O BLK IN 9-5B CK-14, 11-5B
Y R DATA 2⁰ OUT 9-14A 7-14A
2¹ 9-14B 7-14B
2² 9-13A 7-13A
2³ 9-13B 7-13B
2⁴ 9-12A 7-12A
2⁵ 9-12B 7-12B
2⁶ 9-11A 7-11A
2⁷ 9-11B 7-11B
PR-48
DL. R CK OUT 9-7A PR-48,7-9A
Y COUNT CK IN 10-21B CK-14, 12-21B
PB V IN 10-20A PR-48, 8-20A
FH IN 9-3A CK-14, 11-3A
Y COUNT H IN 10-25A CK-14, 12-17A
NORM/BID IN 10-6A CK-14, 12-6A
VD IN 9-5A CK-14, 11-5A
HD IN 9-4A CK-14, 11-4A
LOAD V OUT 10-25B EN-21,6-12A
C.R DO OUT 9-10A PR-48, 7-10A
R-Y DATA 2⁰ OUT 9-24A 7-24A
2¹ 9-24B 7-24B
2² 9-23A 7-23A
2³ 9-23B 7-23B
2⁴ 9-22A 7-22A
2⁵ 9-22B 7-22B
2⁶ 9-21A 7-21A
2⁷ 9-21B 7-21B
PR-48
B-Y DATA 2⁰ OUT 9-19A 7-19A
2¹ 9-19B 7-19B
2² 9-18A 7-18A
2³ 9-18B 7-18B
2⁴ 9-17A 7-17A
2⁵ 9-17B 7-17B
2⁶ 9-16A 7-16A
2⁷ 9-16B 7-16B
PR-48

MY-17

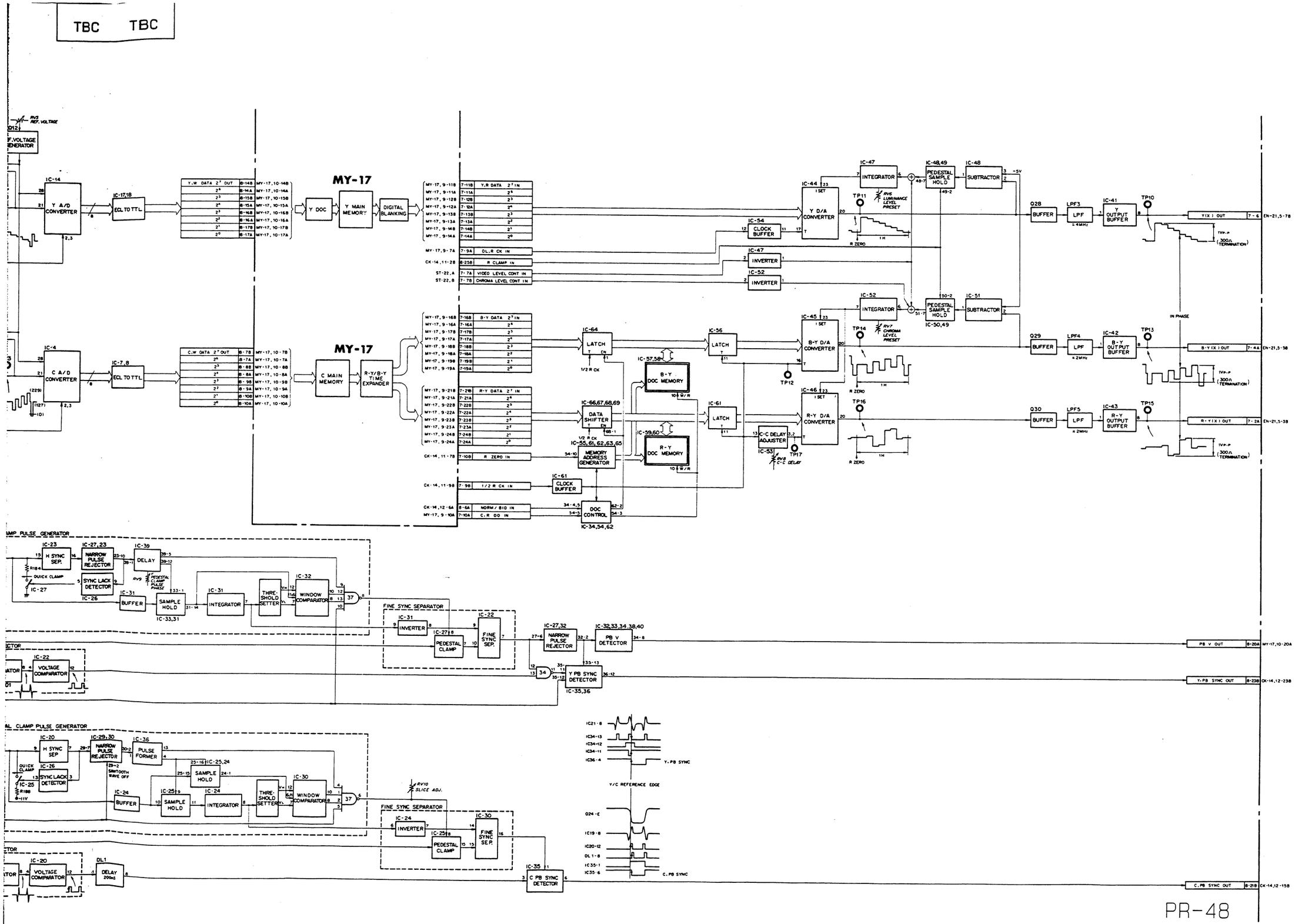
TBC TBC

VIDEO TBC, PR-48



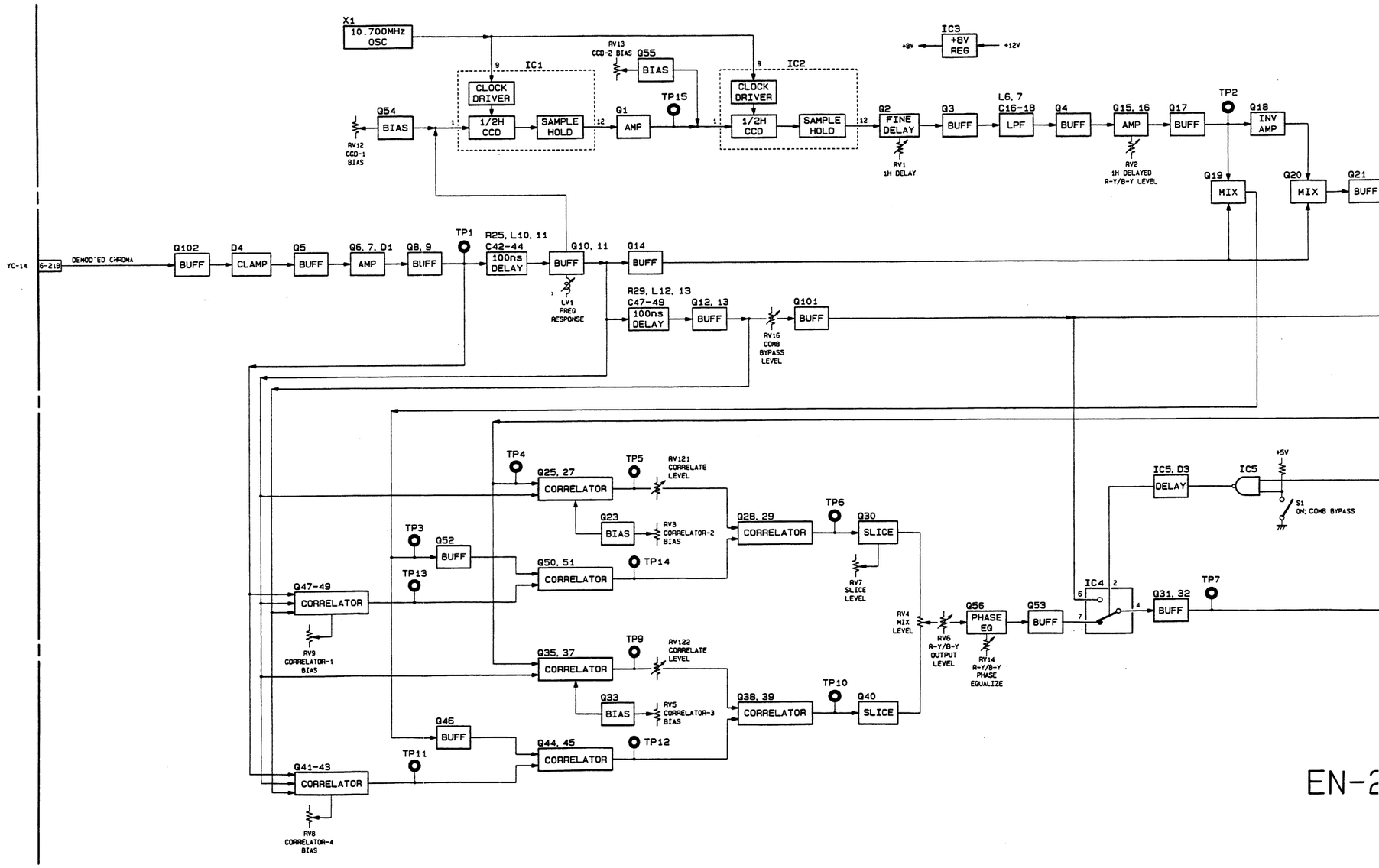
TBC TBC

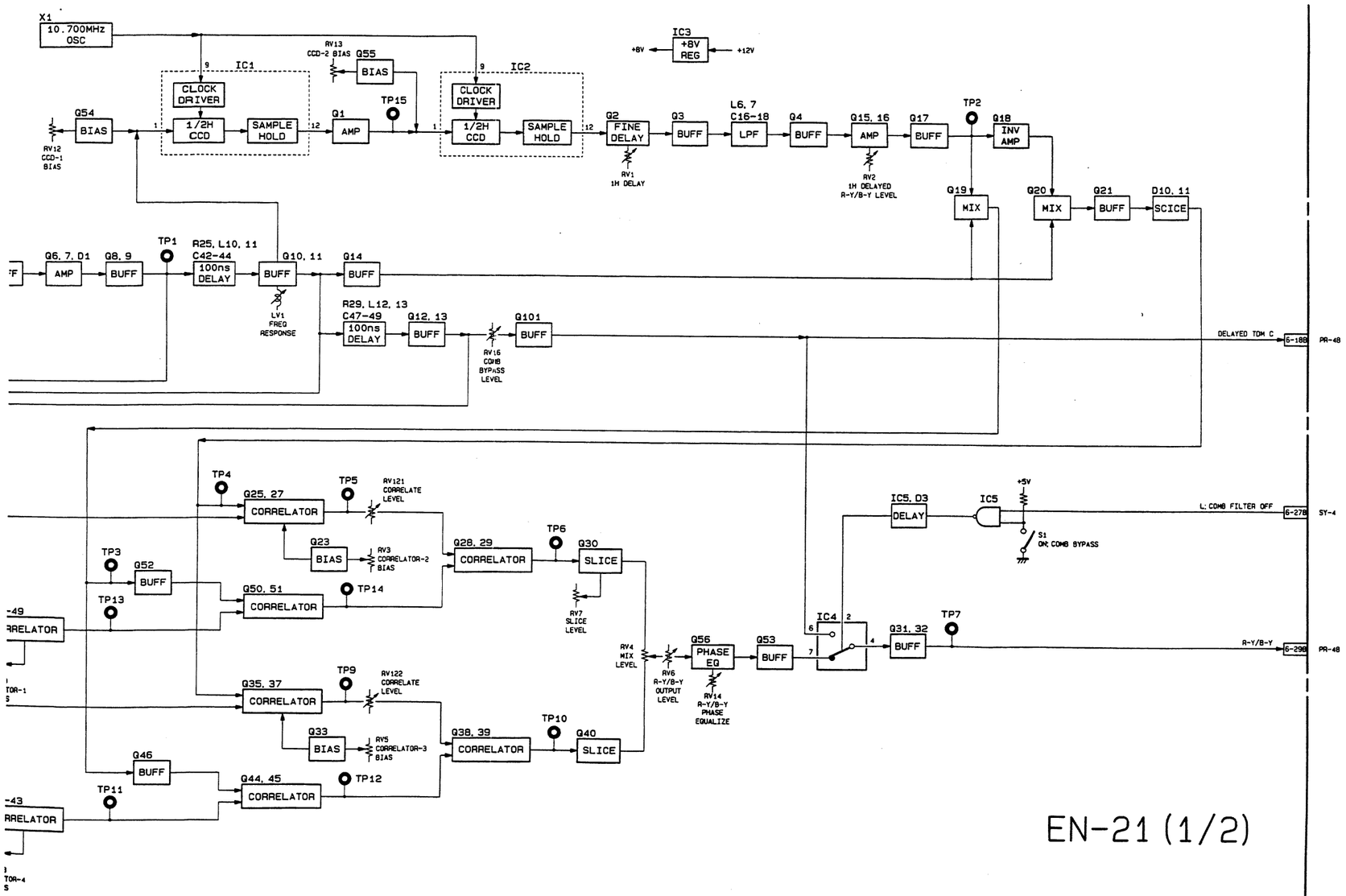
TBC



PR-48

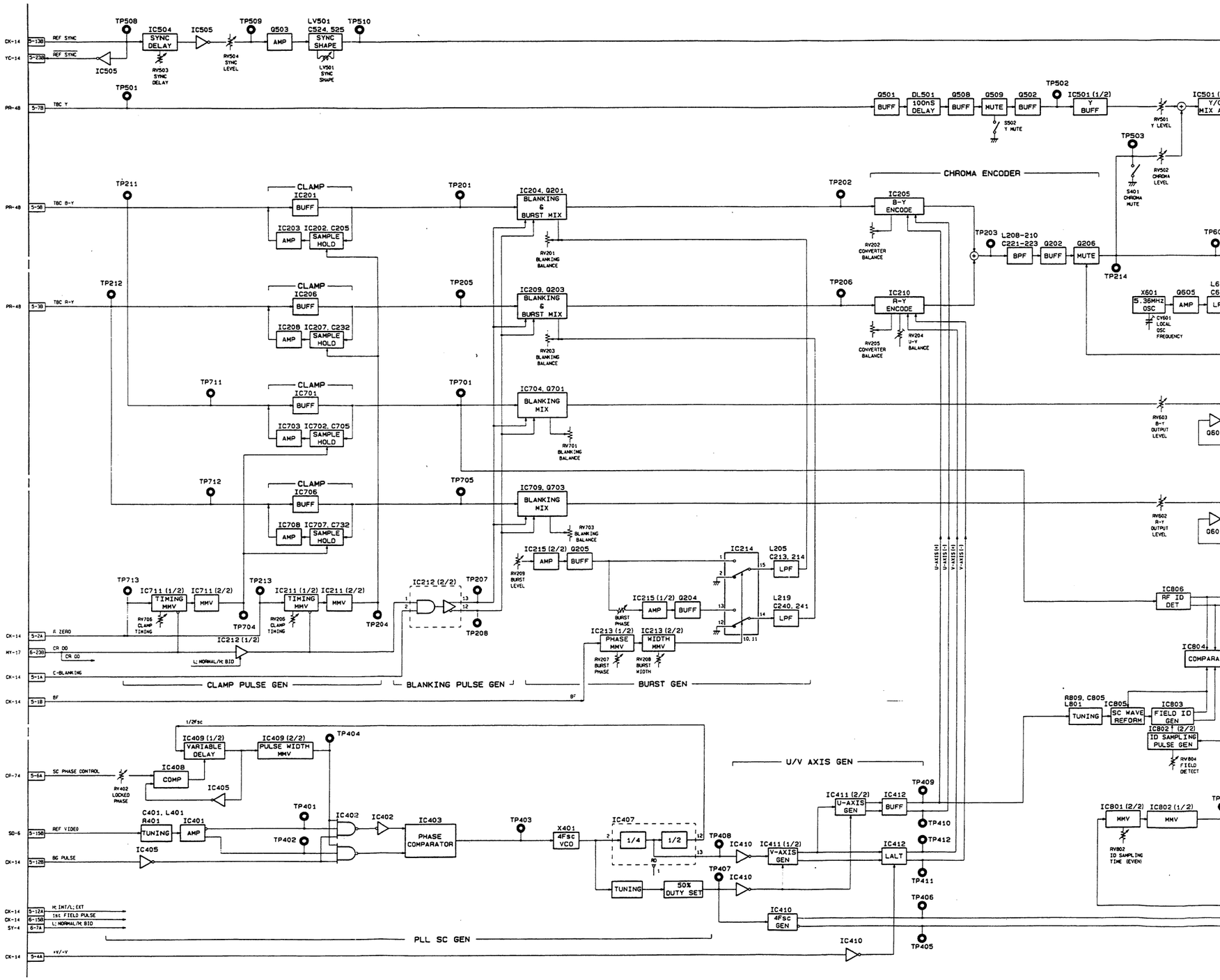
CHROMA COMB FILTER

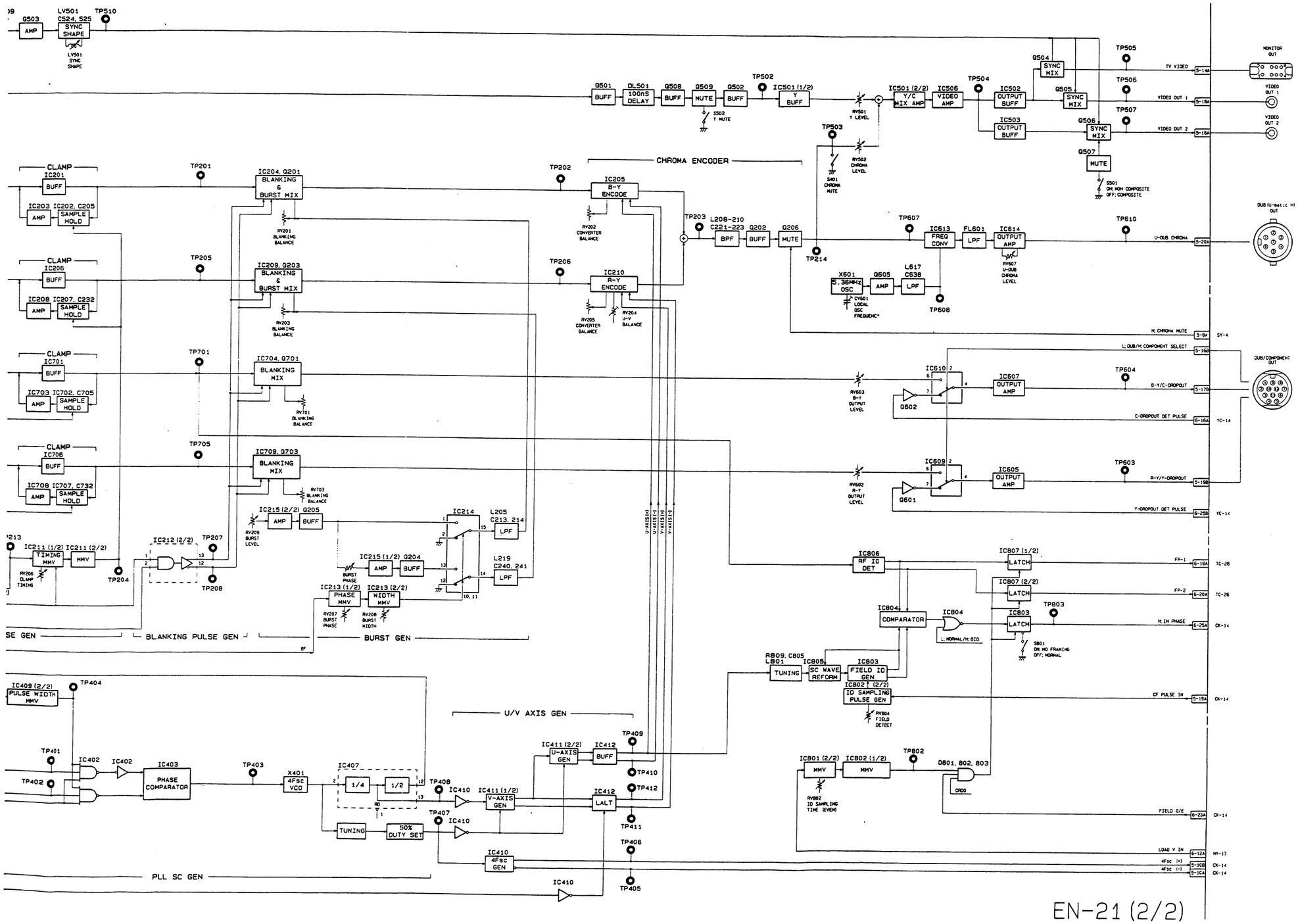



X1
10.700MHz OSC
IC1
IC2
IC3
+8V REG
+8V
+12V
CLOCK DRIVER
1/2H CCD
SAMPLE HOLD
RV13 CCD-2 BIAS
Q55
BIAS
Q54
RV12 CCD-1 BIAS
Q1
AMP
TP15
Q2
FINE DELAY
RV1 1H DELAY
Q3
BUFF
L6, 7 C16-18
LPF
Q4
Q15, 16
RV2 1H DELAYED R-Y/B-Y LEVEL
Q17
TP2
Q18
INV AMP
Q19
MIX
Q20
Q21
D10, 11
SCICE
TP1
Q6, 7, D1
Q8, 9
R25, L10, 11 C42-44
100ns DELAY
Q10, 11
Q14
RV11 FREQ RESPONSE
R29, L12, 13 C47-49
Q12, 13
Q101
RV16 COMB BYPASS LEVEL
DELAYED TDM C
6-188
PR-48
TP4
TP5
RV121 CORRELATE LEVEL
Q25, 27
CORRELATOR
Q23
RV3 CORRELATOR-2 BIAS
Q28, 29
TP6
Q30
SLICE
RV7 SLICE LEVEL
TP3
Q52
TP13
Q50, 51
TP14
TP9
RV122 CORRELATE LEVEL
Q35, 37
Q33
RV5 CORRELATOR-3 BIAS
Q38, 39
TP10
Q40
Q46
TP11
Q44, 45
TP12
IC5, D3
DELAY
IC5
+5V
S1 ON: COMB BYPASS
L: COMB FILTER OFF
6-278
SY-4
RV4 MIX LEVEL
RV6 R-Y/B-Y OUTPUT LEVEL
Q56
PHASE EQ
RV14 R-Y/B-Y PHASE EQUALIZE
Q53
IC4
Q31, 32
TP7
R-Y/B-Y
6-298
PR-48

EN-21 (1/2)

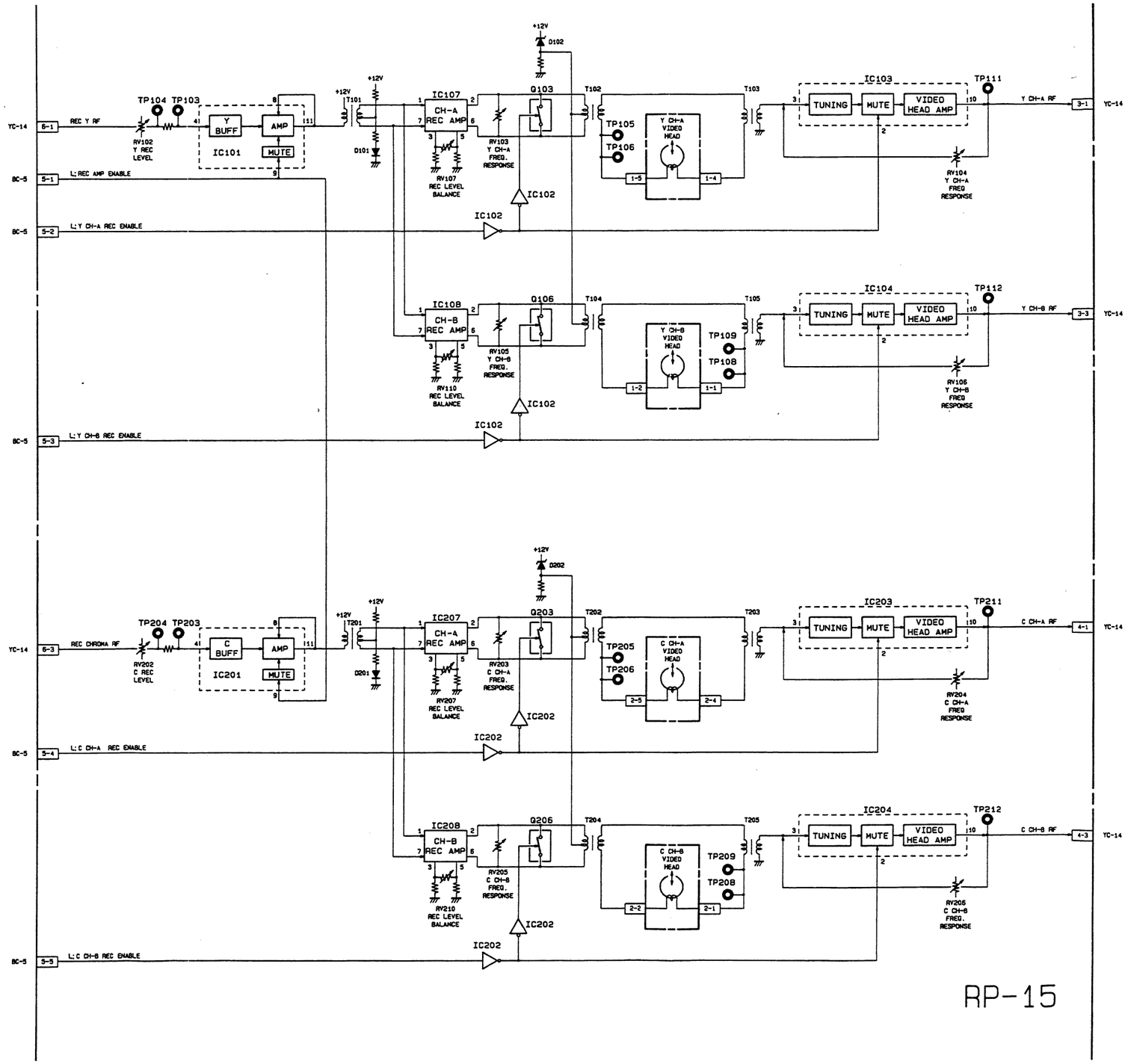
VIDEO ENCODER

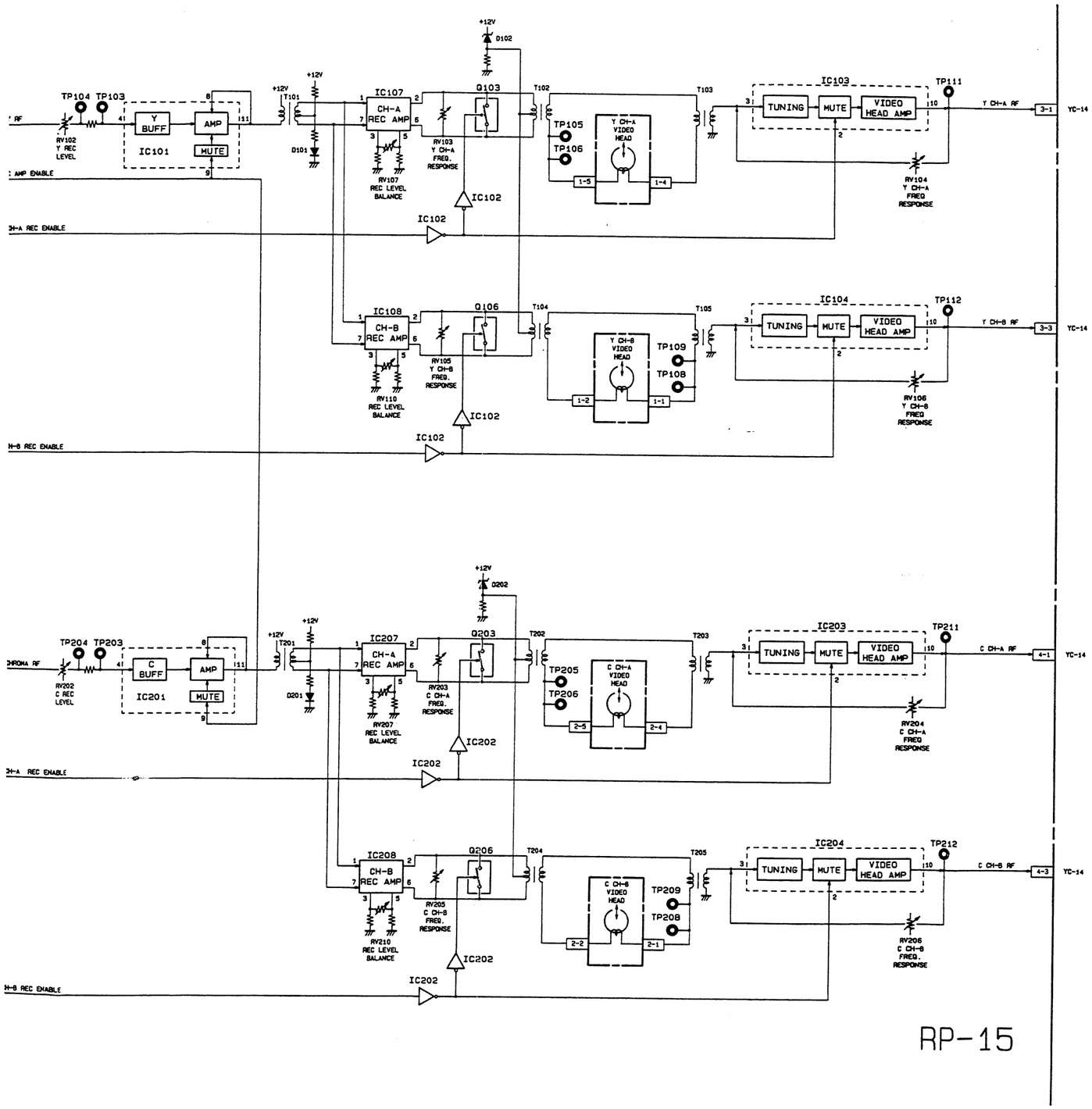



Q503 AMP
LV501 C524, 525 SYNC SHAPE
TP510
LV501 SYNC SHAPE
Q501 BUFF
DL501 100nS DELAY
Q508 BUFF
Q509 MUTE
S502 Y MUTE
Q502 BUFF
TP502
IC501 (1/2) Y BUFF
RV501 Y LEVEL
IC501 (2/2) Y/C MIX AMP
IC506 VIDEO AMP
TP504
IC502 OUTPUT BUFF
IC503 OUTPUT BUFF
Q504 SYNC MIX
Q505 SYNC MIX
Q506 SYNC MIX
Q507 MUTE
S501 ON: NON COMPOSITE OFF: COMPOSITE
TP505
TP506
TP507
TV VIDEO
VIDEO OUT 1
VIDEO OUT 2
5-14A
5-18A
5-16A
MONITOR OUT
VIDEO OUT 1
VIDEO OUT 2
TP503
S401 CHROMA MUTE
RV502 CHROMA LEVEL
CHROMA ENCODER
CLAMP
IC201 BUFF
IC203 IC202, C205 AMP SAMPLE HOLD
TP201
IC204, Q201 BLANKING & BURST MIX
RV201 BLANKING BALANCE
TP202
IC205 B-Y ENCODE
RV202 CONVERTER BALANCE
CLAMP
IC206 BUFF
IC208 IC207, C232 AMP SAMPLE HOLD
TP205
IC209, Q203 BLANKING & BURST MIX
RV203 BLANKING BALANCE
TP206
IC210 R-Y ENCODE
RV205 CONVERTER BALANCE
RV204 U-V BALANCE
TP203
L208-210 C221-223
BPF
BUFF
Q202
Q206 MUTE
TP214
TP607
IC613 FREQ CONV
FL601 LPF
IC614 OUTPUT AMP
RV607 U-DUB CHROMA LEVEL
TP610
U-DUB CHROMA
5-20A
DUB (U-matic HI) OUT
X601 5.36MHz OSC
Q505 AMP
L617 C638 LPF
CY601 LOCAL OSC FREQUENCY
TP608
H CHROMA MUTE
3-8A
SY-4
L: DUB/H COMPONENT SELECT
5-16B
DUB/COMPONENT OUT
CLAMP
IC701 BUFF
IC703 IC702, C705 AMP SAMPLE HOLD
TP701
IC704, Q701 BLANKING MIX
RV701 BLANKING BALANCE
RV503 B-Y OUTPUT LEVEL
IC610
Q502
IC607 OUTPUT AMP
TP604
B-Y/C-DROPOUT
5-17B
C-DROPOUT DET PULSE
6-16A
YC-14
CLAMP
IC706 BUFF
IC708 IC707, C732 AMP SAMPLE HOLD
TP705
IC709, Q703 BLANKING MIX
RV703 BLANKING BALANCE
RV502 R-Y OUTPUT LEVEL
IC609
Q601
IC605 OUTPUT AMP
TP603
R-Y/Y-DROPOUT
5-19B
Y-DROPOUT DET PULSE
6-25B
YC-14
IC215 (2/2) Q205 AMP BUFF
RV209 BURST LEVEL
IC214
L205 C213, 214 LPF
IC215 (1/2) Q204 AMP BUFF
BURST PHASE
L219 C240, 241 LPF
IC213 (1/2) PHASE MMV
IC213 (2/2) WIDTH MMV
RV207 BURST PHASE
RV208 BURST WIDTH
U-AXIS (+)
U-AXIS (-)
V-AXIS (+)
V-AXIS (-)
IC213
IC211 (1/2) IC211 (2/2) TIMING MMV MMV
RV206 CLAMP TIMING
TP204
IC212 (2/2)
TP207
TP208
IC806 RF ID DET
IC807 (1/2) LATCH
IC807 (2/2) LATCH
IC804 COMPARATOR
IC804
IC803 LATCH
TP803
SB01 ON: NO FRAMING OFF: NORMAL
FP-1
FP-2
H IM PHASE
6-18A
6-20A
6-25A
TC-28
TC-26
CK-14
L: NORMAL/HC BID
RB09, C805 L801 TUNING
IC805 SC WAVE REFORM
IC803 FIELD ID GEN
IC802 † (2/2) ID SAMPLING PULSE GEN
RV804 FIELD DETECT
CF PULSE IN
5-19A
CK-14
SE GEN
BLANKING PULSE GEN
BURST GEN
U/V AXIS GEN
IC409 (2/2) PULSE WIDTH MMV
TP404
TP401
TP402
IC402
IC402
IC403 PHASE COMPARATOR
TP403
X401 4FSC VCO
IC407
1/4
1/2
RD
TP408
IC410
IC411 (1/2) V-AXIS GEN
IC411 (2/2) U-AXIS GEN
IC412 BUFF
IC412 LALT
TP409
TP410
TP412
TP411
TP407
IC410
TUNING
50% DUTY SET
TP406
IC410 4FSC GEN
TP405
IC410
PLL SC GEN
IC801 (2/2) MMV
IC802 (1/2) MMV
TP802
D801, 802, 803 CR00
RV802 ID SAMPLING TIME (EVEN)
FIELD O/E
6-23A
CK-14
LOAD V IN
6-12A
WY-17
4Fsc (+)
4Fsc (-)
5-10B
5-10A
CK-14
CK-14

EN-21 (2/2)

Y/C REC PB AMPLIFIER

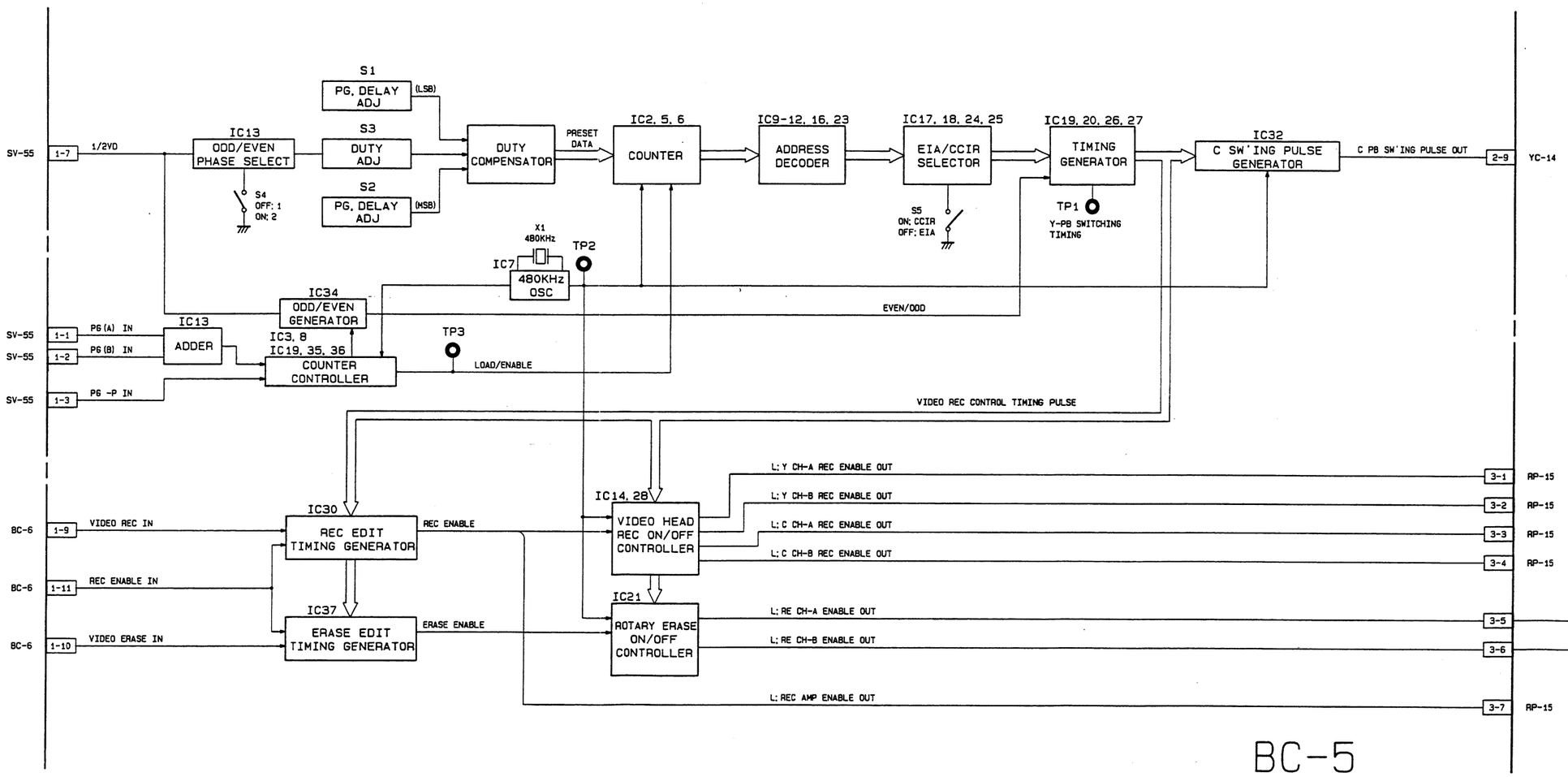



+12V
D102
TP104 TP103
RV102 Y REC LEVEL
Y BUFF
AMP
MUTE
IC101
+12V
T101
D101
IC107
CH-A REC AMP
RV107 REC LEVEL BALANCE
RV103 Y CH-A FREQ. RESPONSE
Q103
IC102
T102
TP105
TP106
Y CH-A VIDEO HEAD
T103
IC103
TUNING
MUTE
VIDEO HEAD AMP
TP111
Y CH-A RF
3-1
YC-14
RV104 Y CH-A FREQ RESPONSE
AMP ENABLE
CH-A REC ENABLE
IC108
CH-B REC AMP
RV110 REC LEVEL BALANCE
RV105 Y CH-B FREQ. RESPONSE
Q106
T104
T105
Y CH-B VIDEO HEAD
TP109
TP108
IC104
TP112
Y CH-B RF
3-3
YC-14
RV106 Y CH-B FREQ RESPONSE
CH-B REC ENABLE
+12V
Q202
TP204 TP203
RV202 C REC LEVEL
C BUFF
AMP
MUTE
IC201
+12V
T201
D201
IC207
CH-A REC AMP
RV207 REC LEVEL BALANCE
RV203 C CH-A FREQ. RESPONSE
Q203
IC202
T202
TP205
TP206
C CH-A VIDEO HEAD
T203
IC203
TUNING
MUTE
VIDEO HEAD AMP
TP211
C CH-A RF
4-1
YC-14
RV204 C CH-A FREQ RESPONSE
CHROMA RF
CH-A REC ENABLE
IC208
CH-B REC AMP
RV210 REC LEVEL BALANCE
RV205 C CH-B FREQ. RESPONSE
Q206
T204
T205
C CH-B VIDEO HEAD
TP209
TP208
IC204
TP212
C CH-B RF
4-3
YC-14
RV206 C CH-B FREQ. RESPONSE
CH-B REC ENABLE

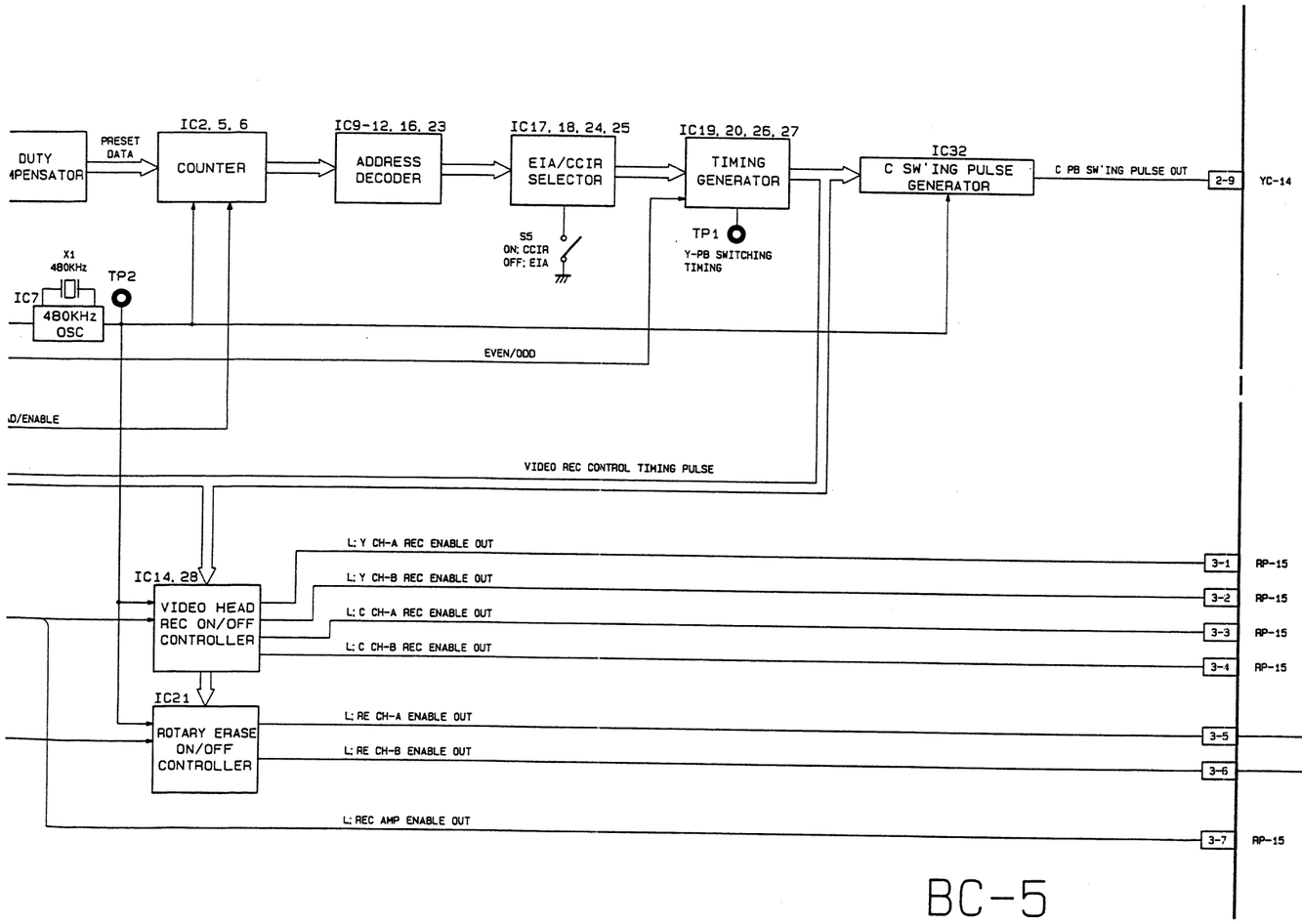
RP-15

VIDEO BLANK.SWITCHER, ROTARY ERASE AMP.

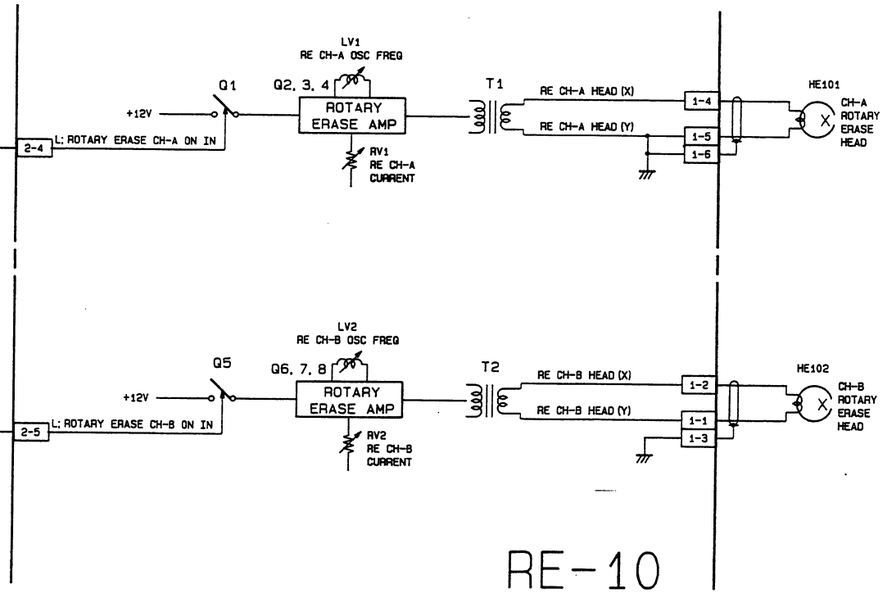
VIDEO BLANKING SWITCHER
ROTARY ERASE AMPLIFIER



BC-5

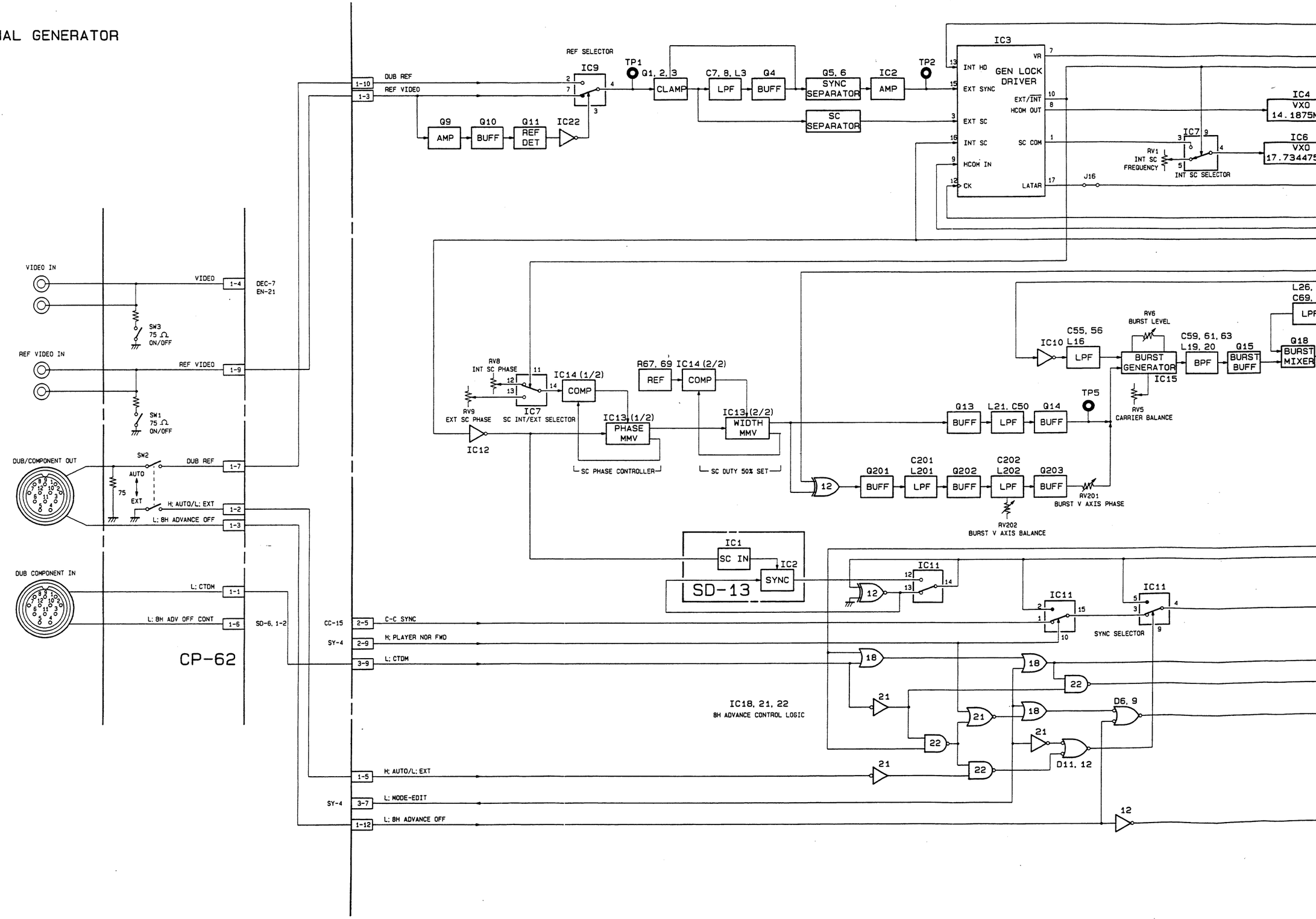

DUTY
4PENSATOR
PRESET DATA
IC2, 5, 6
COUNTER
IC9-12, 16, 23
ADDRESS DECODER
IC17, 18, 24, 25
EIA/CCIR SELECTOR
S5
ON: CCIR
OFF: EIA
IC19, 20, 26, 27
TIMING GENERATOR
TP1
Y-PB SWITCHING TIMING
IC32
C SW'ING PULSE GENERATOR
C PB SW'ING PULSE OUT
2-9
YC-14
X1
480KHz
IC7
480KHz OSC
TP2
EVEN/ODD
D/ENABLE
VIDEO REC CONTROL TIMING PULSE
IC14, 28
VIDEO HEAD REC ON/OFF CONTROLLER
L: Y CH-A REC ENABLE OUT
L: Y CH-B REC ENABLE OUT
L: C CH-A REC ENABLE OUT
L: C CH-B REC ENABLE OUT
3-1
3-2
3-3
3-4
RP-15
IC21
ROTARY ERASE ON/OFF CONTROLLER
L: RE CH-A ENABLE OUT
L: RE CH-B ENABLE OUT
3-5
3-6
L: REC AMP ENABLE OUT
3-7
RP-15

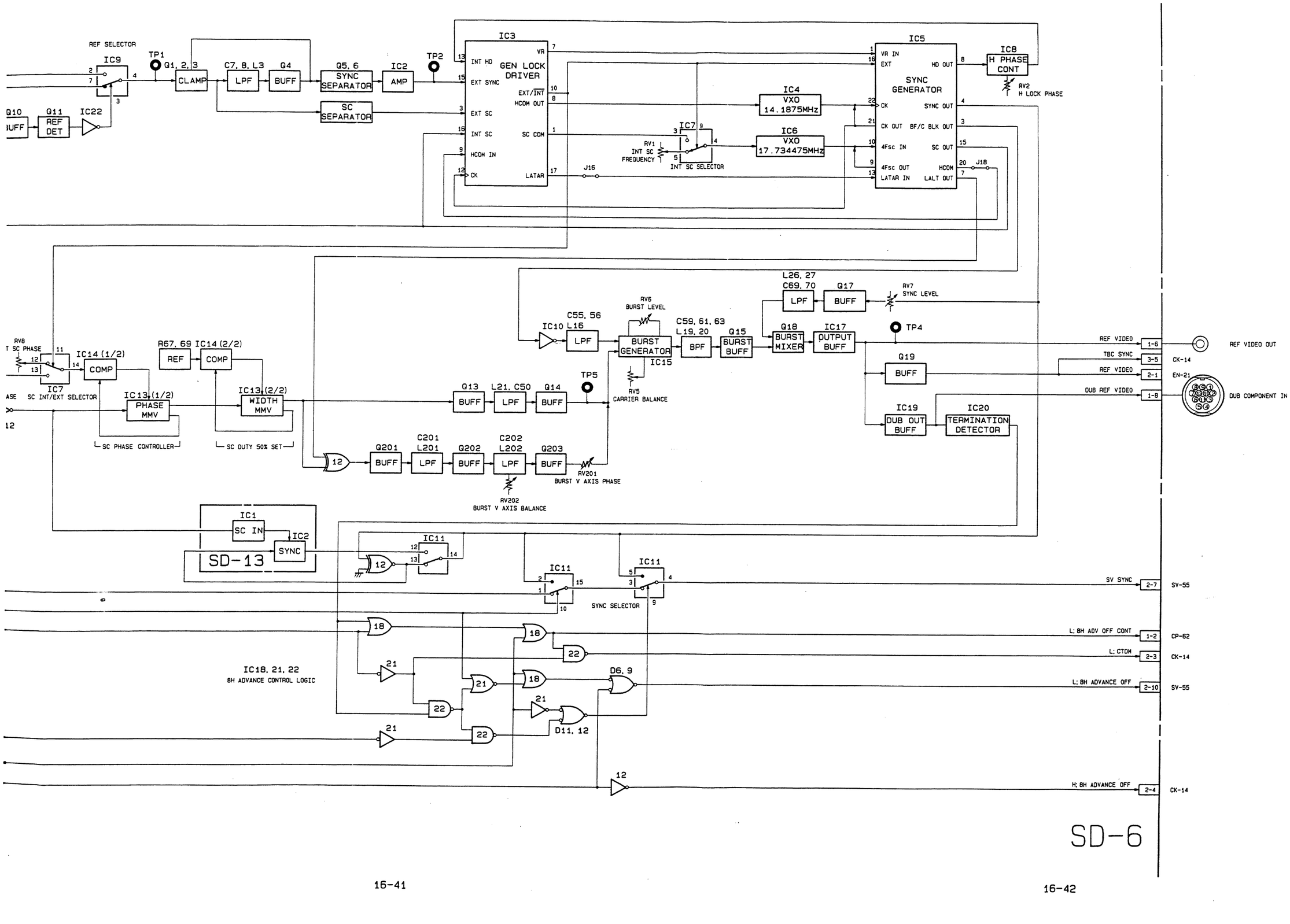
BC-5


LV1
RE CH-A OSC FREQ
Q1
Q2, 3, 4
+12V
ROTARY ERASE AMP
RV1
RE CH-A CURRENT
2-4
L: ROTARY ERASE CH-A ON IN
T1
RE CH-A HEAD (X)
RE CH-A HEAD (Y)
1-4
1-5
1-6
HE101
CH-A ROTARY ERASE HEAD
LV2
RE CH-B OSC FREQ
Q5
Q6, 7, 8
+12V
ROTARY ERASE AMP
RV2
RE CH-B CURRENT
2-5
L: ROTARY ERASE CH-B ON IN
T2
RE CH-B HEAD (X)
RE CH-B HEAD (Y)
1-2
1-1
1-3
HE102
CH-B ROTARY ERASE HEAD

RE-10

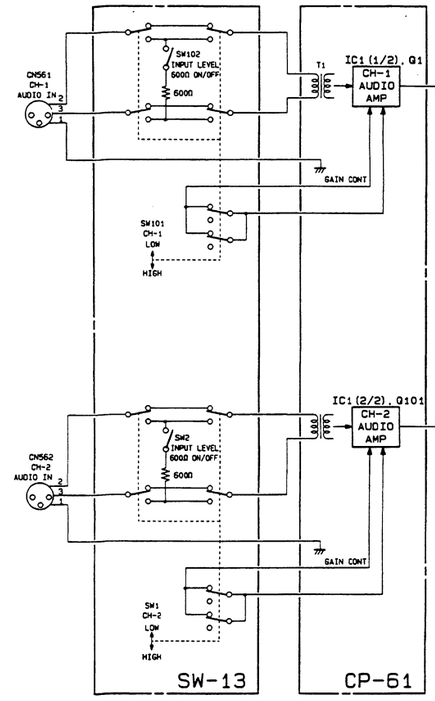
REFERENCE SIGNAL GENERATOR

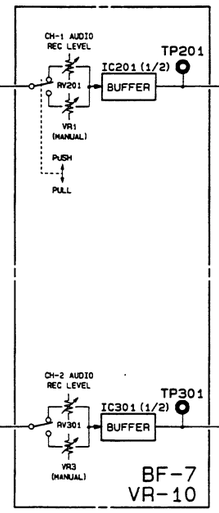


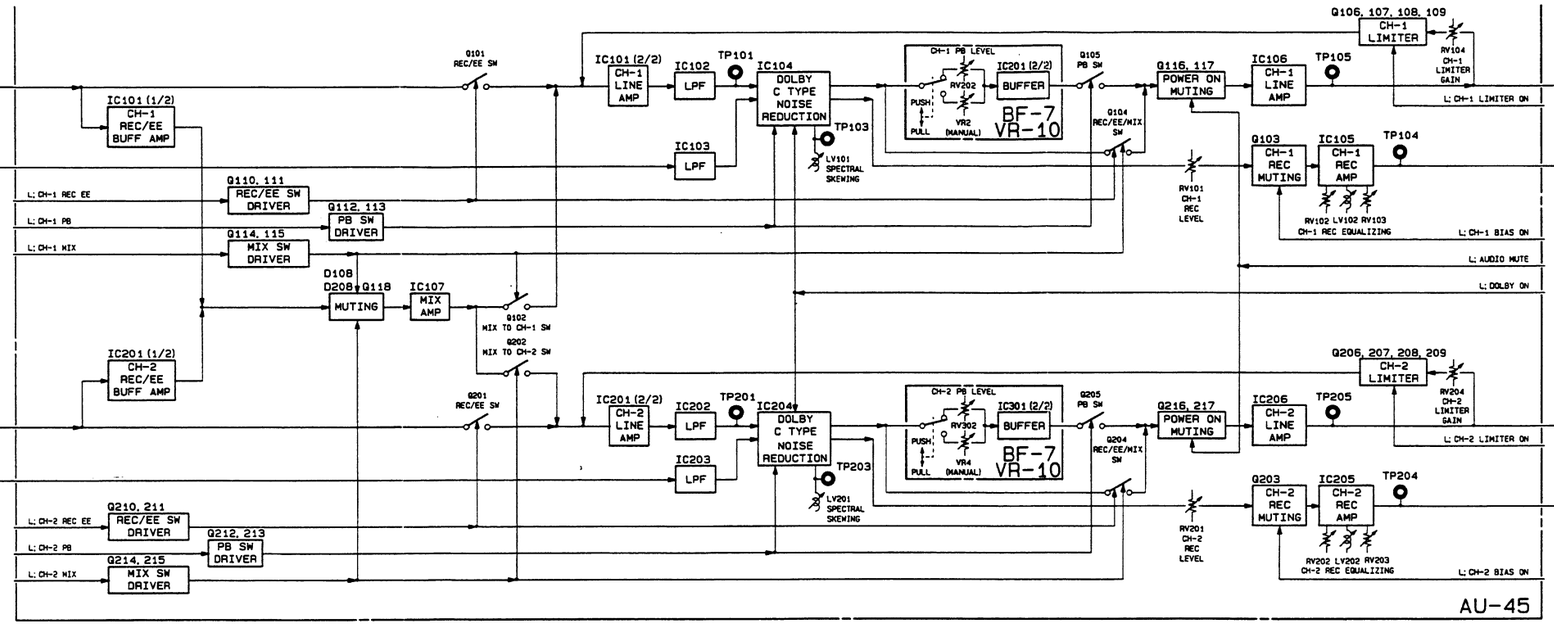

REF SELECTOR
IC9
TP1
Q1, 2, 3
CLAMP
C7, 8, L3
LPF
Q4
BUFF
Q5, 6
SYNC SEPARATOR
IC2
AMP
TP2
SC SEPARATOR
Q10
BUFF
Q11
REF DET
IC22
IC3
GEN LOCK DRIVER
INT HD
EXT SYNC
EXT SC
INT SC
HCOM IN
CK
VR
EXT/INT
HCOM OUT
SC COM
LATAR
J16
IC4
VXO 14.1875MHz
IC7
INT SC SELECTOR
RV1
INT SC FREQUENCY
IC6
VXO 17.734475MHz
IC5
SYNC GENERATOR
VR IN
EXT
CK
CK OUT
4Fsc IN
4Fsc OUT
LATAR IN
HD OUT
SYNC OUT
BF/C BLK OUT
SC OUT
HCOM
LALT OUT
IC8
H PHASE CONT
RV2
H LOCK PHASE
J18
L26, 27
C69, 70
LPF
Q17
BUFF
RV7
SYNC LEVEL
RV6
BURST LEVEL
IC10
L16
LPF
C55, 56
BURST GENERATOR
IC15
C59, 61, 63
L19, 20
BPF
Q15
BURST BUFF
Q18
BURST MIXER
IC17
OUTPUT BUFF
TP4
RV8
T SC PHASE
IC14 (1/2)
COMP
IC7
SC INT/EXT SELECTOR
R67, 69
REF
IC14 (2/2)
COMP
IC13 (1/2)
PHASE MMV
IC13 (2/2)
WIDTH MMV
SC PHASE CONTROLLER
SC DUTY 50% SET
TP5
Q13
BUFF
L21, C50
LPF
Q14
BUFF
RV5
CARRIER BALANCE
Q19
BUFF
IC19
DUB OUT BUFF
IC20
TERMINATION DETECTOR
REF VIDEO
TBC SYNC
REF VIDEO
DUB REF VIDEO
1-6
3-5
2-1
1-8
REF VIDEO OUT
CK-14
EN-21
DUB COMPONENT IN
Q201
BUFF
C201
L201
LPF
Q202
BUFF
C202
L202
LPF
Q203
BUFF
RV201
BURST V AXIS PHASE
RV202
BURST V AXIS BALANCE
IC1
SC IN
IC2
SYNC
SD-13
IC11
SYNC SELECTOR
IC18, 21, 22
8H ADVANCE CONTROL LOGIC
D6, 9
D11, 12
SV SYNC
2-7
SV-55
L: 8H ADV OFF CONT
1-2
CP-62
L: CTDM
2-3
CK-14
L: 8H ADVANCE OFF
2-10
SV-55
H: 8H ADVANCE OFF
2-4
CK-14

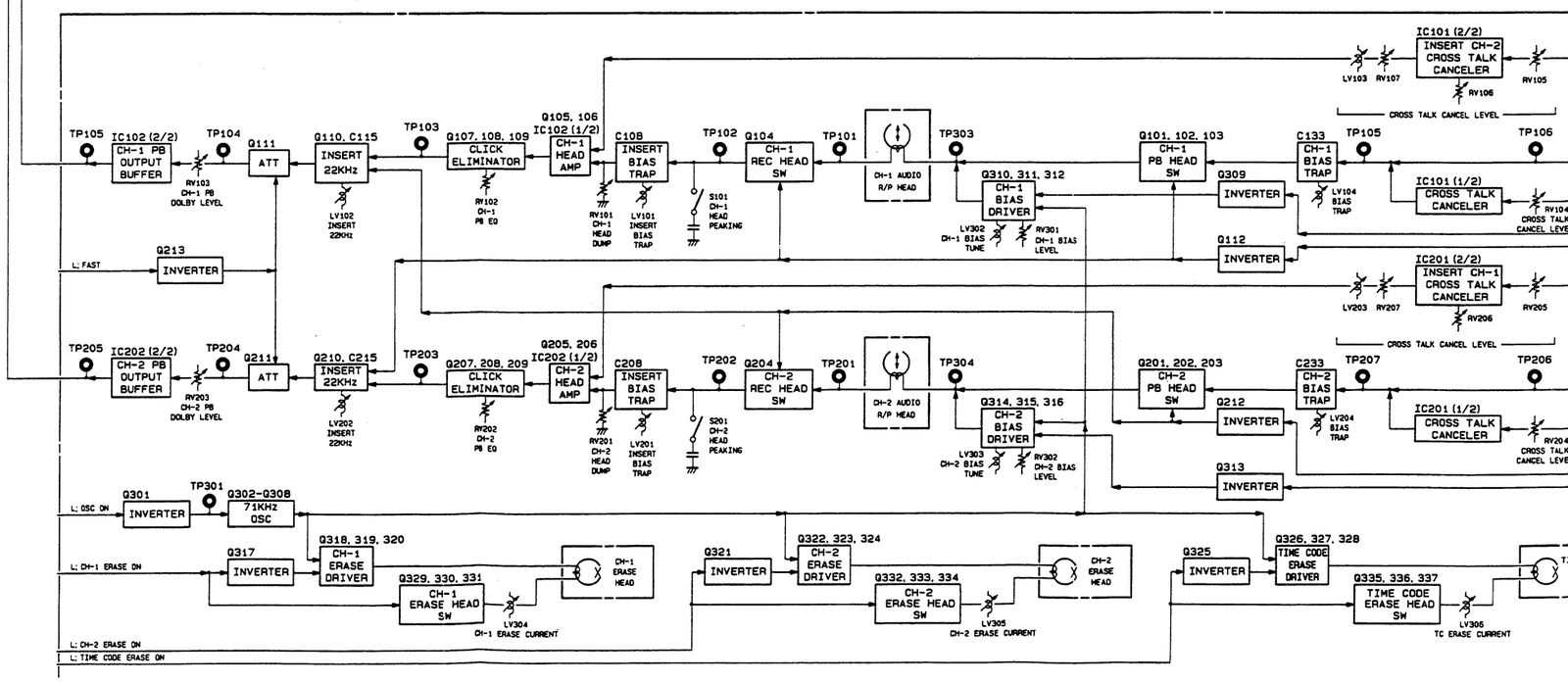
SD-6

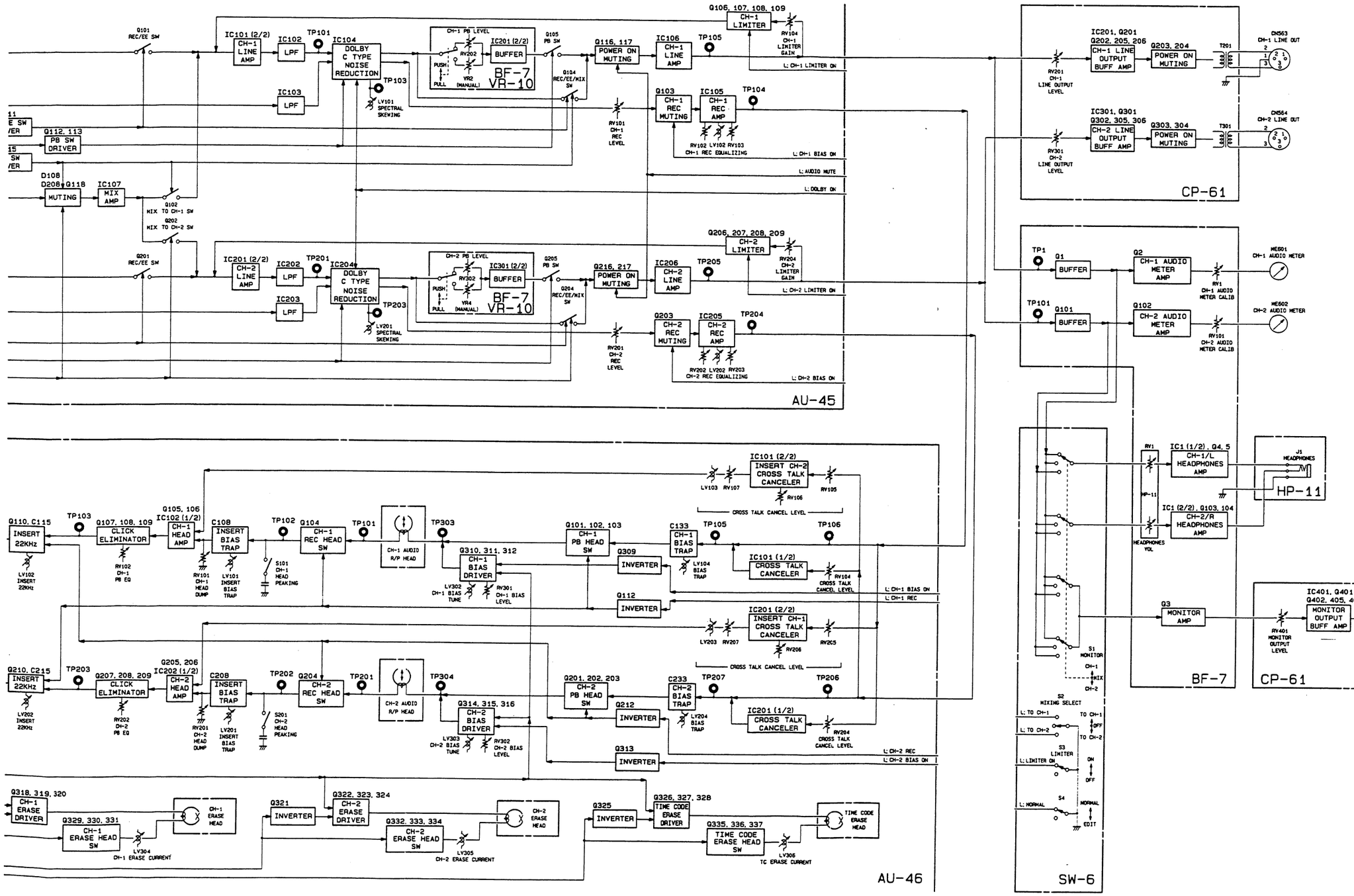
AUDIO REC/PB AMPLIFIER







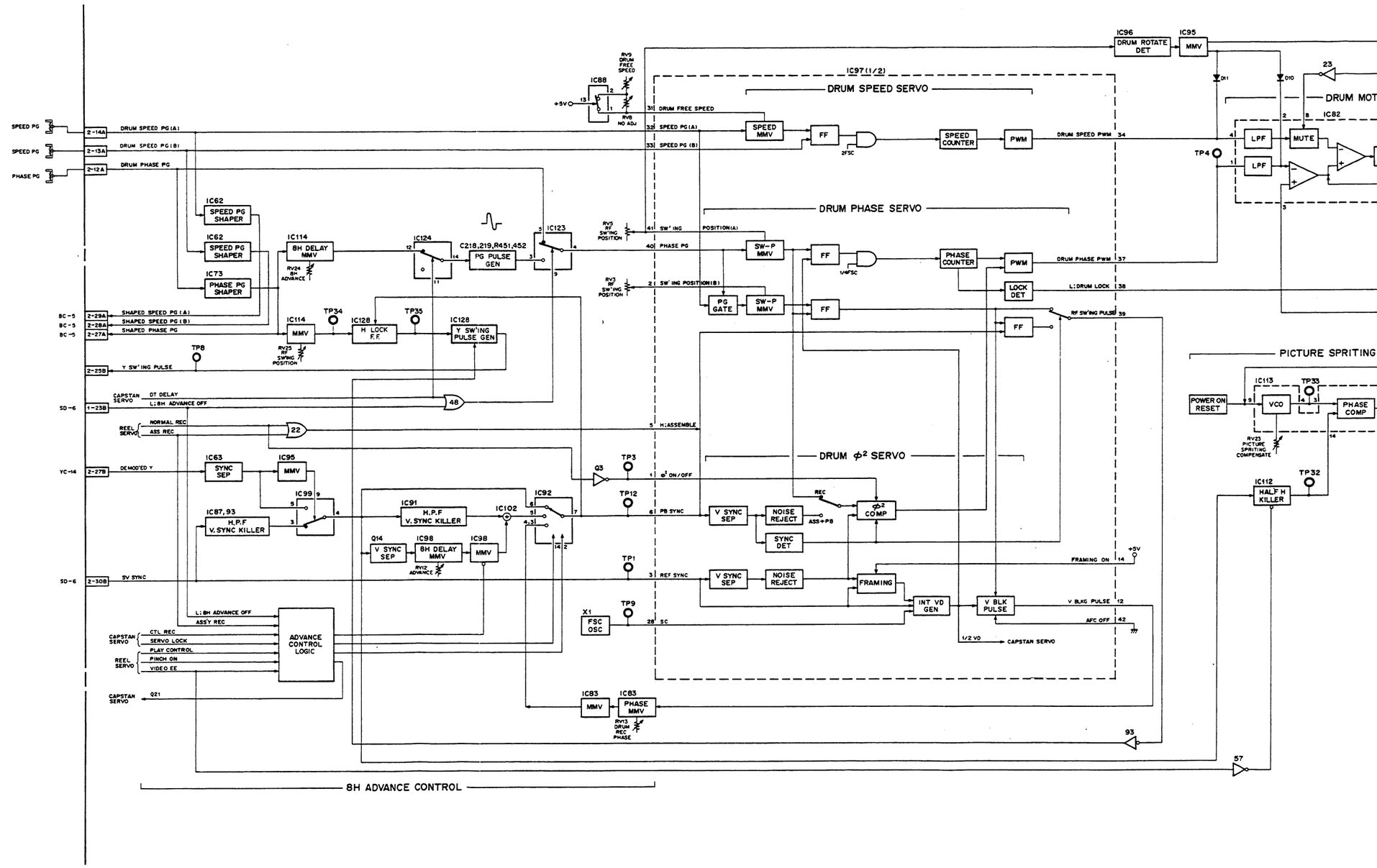


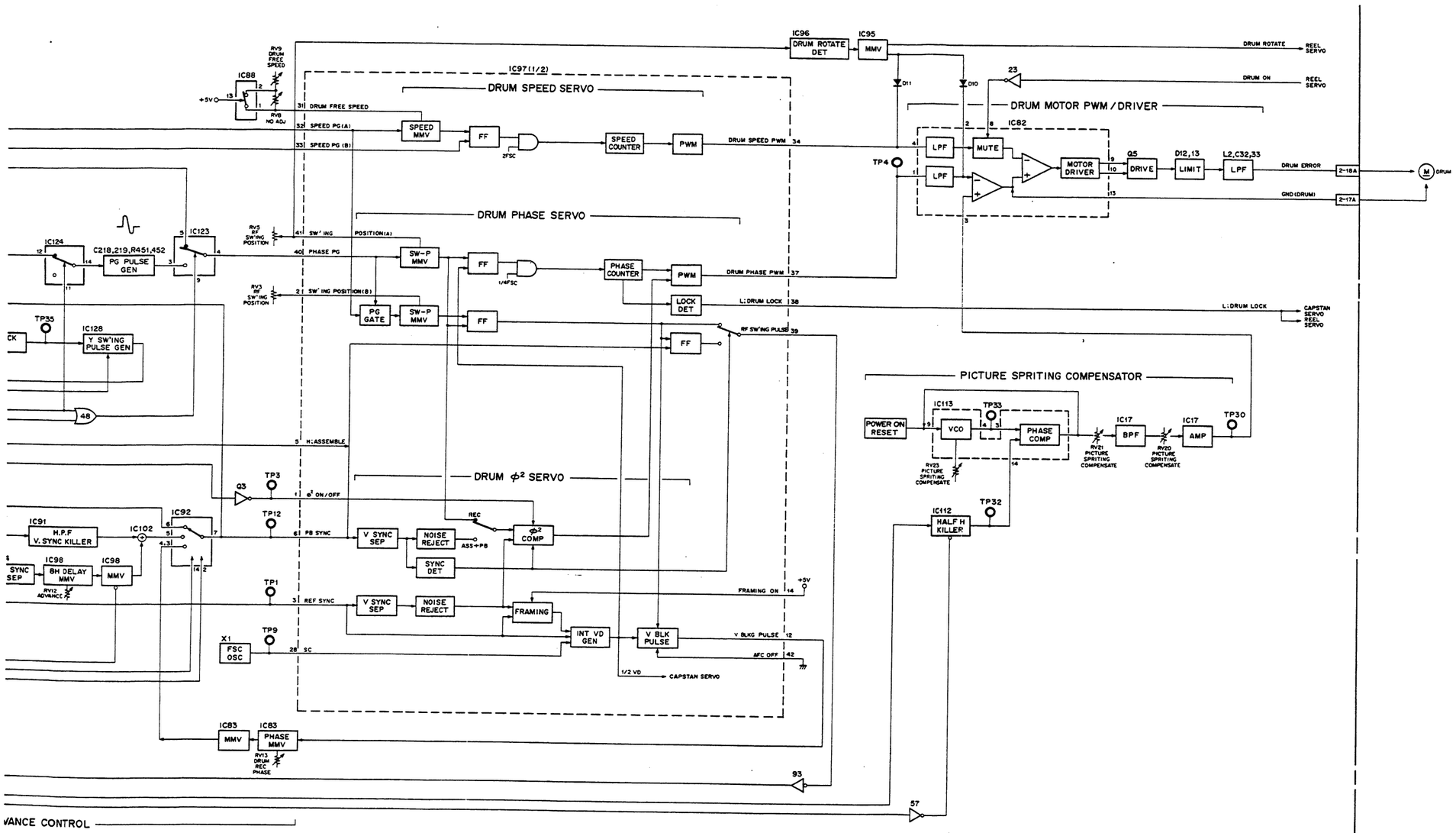

Q101 REC/EE SW
IC101 (2/2) CH-1 LINE AMP
IC102 LPF
IC103 LPF
TP101
IC104 DOLBY C TYPE NOISE REDUCTION
TP103
LV101 SPECTRAL SKEWING
CH-1 PB LEVEL
RV202
IC201 (2/2) BUFFER
PUSH PULL
VR2 (MANUAL)
BF-7 VR-10
Q105 PB SW
Q104 REC/EE/MIX SW
Q116, 117 POWER ON MUTING
IC106 CH-1 LINE AMP
TP105
Q106, 107, 108, 109 CH-1 LIMITER
RV104 CH-1 LIMITER GAIN
L: CH-1 LIMITER ON
Q103 CH-1 REC MUTING
IC105 CH-1 REC AMP
TP104
RV101 CH-1 REC LEVEL
RV102 LV102 RV103 CH-1 REC EQUALIZING
L: CH-1 BIAS ON
L: AUDIO MUTE
L: DOLBY ON
Q112, 113 PB SW DRIVER
D108 D208 MUTING
Q118 IC107 MIX AMP
Q102 MIX TO CH-1 SW
Q202 MIX TO CH-2 SW
Q201 REC/EE SW
IC201 (2/2) CH-2 LINE AMP
IC202 LPF
IC203 LPF
TP201
IC204 DOLBY C TYPE NOISE REDUCTION
TP203
LV201 SPECTRAL SKEWING
CH-2 PB LEVEL
RV302
IC301 (2/2) BUFFER
PUSH PULL
VR4 (MANUAL)
BF-7 VR-10
Q205 PB SW
Q204 REC/EE/MIX SW
Q216, 217 POWER ON MUTING
IC206 CH-2 LINE AMP
TP205
Q206, 207, 208, 209 CH-2 LIMITER
RV204 CH-2 LIMITER GAIN
L: CH-2 LIMITER ON
Q203 CH-2 REC MUTING
IC205 CH-2 REC AMP
TP204
RV201 CH-2 REC LEVEL
RV202 LV202 RV203 CH-2 REC EQUALIZING
L: CH-2 BIAS ON
AU-45
IC101 (2/2) INSERT CH-2 CROSS TALK CANCELER
LV103 RV107
RV105
RV106
CROSS TALK CANCEL LEVEL
Q110, C115 INSERT 22KHz
LV102 INSERT 22KHz
TP103
Q107, 108, 109 CLICK ELIMINATOR
RV102 CH-1 PB EQ
Q105, 106 IC102 (1/2) CH-1 HEAD AMP
C108 INSERT BIAS TRAP
RV101 CH-1 HEAD DUMP
LV101 INSERT BIAS TRAP
TP102
Q104 CH-1 REC HEAD SW
S101 CH-1 HEAD PEAKING
TP101
CH-1 AUDIO R/P HEAD
TP303
Q310, 311, 312 CH-1 BIAS DRIVER
LV302 CH-1 BIAS TUNE
RV301 CH-1 BIAS LEVEL
Q101, 102, 103 CH-1 PB HEAD SW
Q309 INVERTER
Q112 INVERTER
C133 CH-1 BIAS TRAP
LV104 BIAS TRAP
TP105
TP106
IC101 (1/2) CROSS TALK CANCELER
RV104 CROSS TALK CANCEL LEVEL
L: CH-1 BIAS ON
L: CH-1 REC
IC201 (2/2) INSERT CH-1 CROSS TALK CANCELER
LV203 RV207
RV205
RV206
CROSS TALK CANCEL LEVEL
Q210, C215 INSERT 22KHz
LV202 INSERT 22KHz
TP203
Q207, 208, 209 CLICK ELIMINATOR
RV202 CH-2 PB EQ
Q205, 206 IC202 (1/2) CH-2 HEAD AMP
C208 INSERT BIAS TRAP
RV201 CH-2 HEAD DUMP
LV201 INSERT BIAS TRAP
TP202
Q204 CH-2 REC HEAD SW
S201 CH-2 HEAD PEAKING
TP201
CH-2 AUDIO R/P HEAD
TP304
Q314, 315, 316 CH-2 BIAS DRIVER
LV303 CH-2 BIAS TUNE
RV302 CH-2 BIAS LEVEL
Q201, 202, 203 CH-2 PB HEAD SW
Q212 INVERTER
Q313 INVERTER
C233 CH-2 BIAS TRAP
LV204 BIAS TRAP
TP207
TP206
IC201 (1/2) CROSS TALK CANCELER
RV204 CROSS TALK CANCEL LEVEL
L: CH-2 REC
L: CH-2 BIAS ON
Q318, 319, 320 CH-1 ERASE DRIVER
Q329, 330, 331 CH-1 ERASE HEAD SW
LV304 CH-1 ERASE CURRENT
CH-1 ERASE HEAD
Q321 INVERTER
Q322, 323, 324 CH-2 ERASE DRIVER
Q332, 333, 334 CH-2 ERASE HEAD SW
LV305 CH-2 ERASE CURRENT
CH-2 ERASE HEAD
Q325 INVERTER
Q326, 327, 328 TIME CODE ERASE DRIVER
Q335, 336, 337 TIME CODE ERASE HEAD SW
LV306 TC ERASE CURRENT
TIME CODE ERASE HEAD
AU-46

IC201, Q201 Q202, 205, 206 CH-1 LINE OUTPUT BUFF AMP
Q203, 204 POWER ON MUTING
T201
CN563 CH-1 LINE OUT
RV201 CH-1 LINE OUTPUT LEVEL
IC301, Q301 Q302, 305, 306 CH-2 LINE OUTPUT BUFF AMP
Q303, 304 POWER ON MUTING
T301
CN564 CH-2 LINE OUT
RV301 CH-2 LINE OUTPUT LEVEL
CP-61

TP1
Q1 BUFFER
Q2 CH-1 AUDIO METER AMP
ME601 CH-1 AUDIO METER
RV1 CH-1 AUDIO METER CALIB
TP101
Q101 BUFFER
Q102 CH-2 AUDIO METER AMP
ME602 CH-2 AUDIO METER
RV101 CH-2 AUDIO METER CALIB
RV1
IC1 (1/2), Q4, 5 CH-1/L HEADPHONES AMP
J1 HEADPHONES
HP-11
IC1 (2/2), Q103, 104 CH-2/R HEADPHONES AMP
HEADPHONES VOL
Q3 MONITOR AMP
BF-7
IC401, Q401 Q402, 405, 406 MONITOR OUTPUT BUFF AMP
Q403, 404 POWER ON MUTING
Q407, 408 POWER ON MUTING
T401
CN565 AUDIO MONITOR OUT
CN560 TV MONITOR OUT
RV401 MONITOR OUTPUT LEVEL
CP-61
S1 MONITOR CH-1 MIX CH-2
S2 MIXING SELECT
L: TO CH-1
L: TO CH-2
TO CH-1 OFF TO CH-2
S3 LIMITER
L: LIMITER ON
ON OFF
S4
L: NORMAL
NORMAL EDIT
SW-6

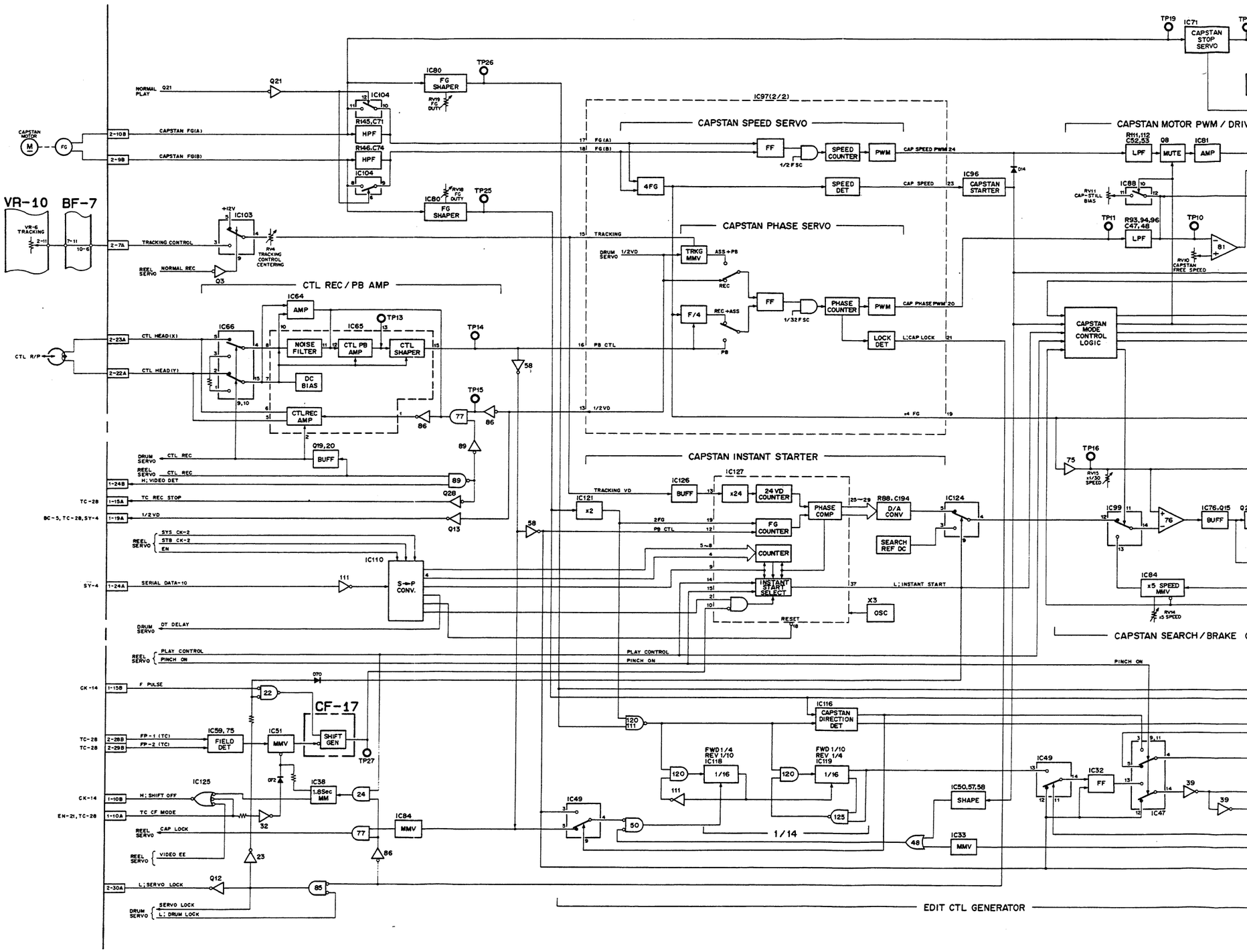
DRUM SERVO

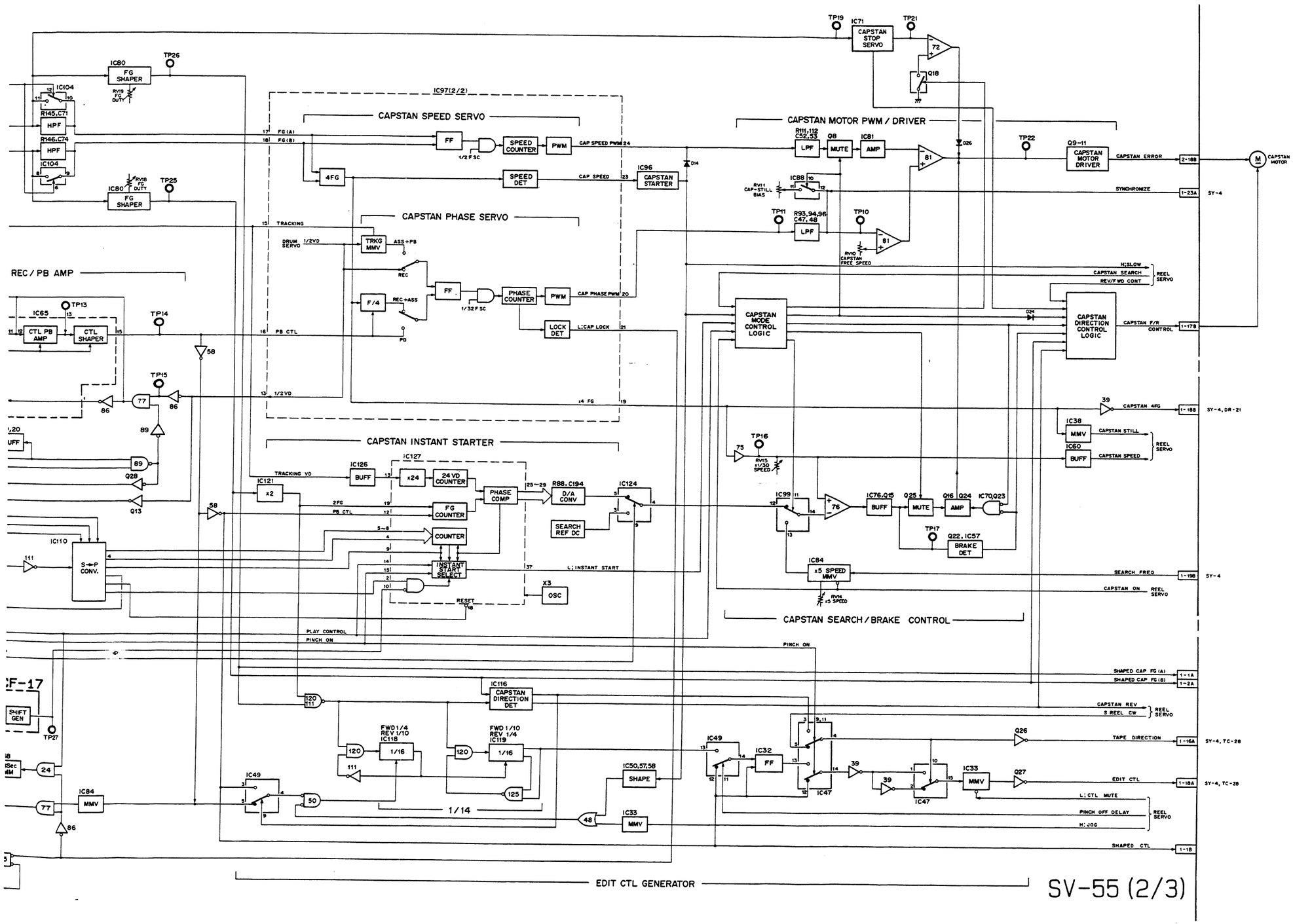

SPEED PG
SPEED PG
PHASE PG
2-14A
2-13A
2-12A
DRUM SPEED PG(A)
DRUM SPEED PG(B)
DRUM PHASE PG
IC62 SPEED PG SHAPER
IC62 SPEED PG SHAPER
IC73 PHASE PG SHAPER
IC114 8H DELAY MMV
RV24 8H ADVANCE
IC124
C218,219,R451,452
PG PULSE GEN
IC123
RV3 RF SW'ING POSITION
IC88
RV9 DRUM FREE SPEED
RV8 NO ADJ
+5V
IC96 DRUM ROTATE DET
IC95 MMV
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DRUM SPEED SERVO
31 DRUM FREE SPEED
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33 SPEED PG(B)
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FF
2FSC
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PWM
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SW-P MMV
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LPF
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D11
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POWER ON RESET
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PHASE COMP
RV23 PICTURE SPRITING COMPENSATE
IC112
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TP32
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SHAPED SPEED PG(B)
SHAPED PHASE PG
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TP34
IC128 H LOCK F.F.
TP35
IC128 Y SW'ING PULSE GEN
TP8
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22
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DEMOD'ED Y
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IC99
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IC91 H.P.F V.SYNC KILLER
IC102
IC92
Q14 V SYNC SEP
IC98 8H DELAY MMV
IC98 MMV
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Q3
TP3
1 φ² ON/OFF
TP12
6 PB SYNC
DRUM φ² SERVO
V SYNC SEP
NOISE REJECT
REC
ASS+PB
φ² COMP
SYNC DET
SV SYNC
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NOISE REJECT
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+5V
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SERVO LOCK
PLAY CONTROL
REEL SERVO
PINCH ON
VIDEO EE
ADVANCE CONTROL LOGIC
CAPSTAN SERVO
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IC83 PHASE MMV
RV13 DRUM REC PHASE
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8H ADVANCE CONTROL


IC96
DRUM ROTATE DET
IC95
MMV
DRUM ROTATE
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DRUM ON
REEL SERVO
IC97(1/2)
DRUM SPEED SERVO
RV9 DRUM FREE SPEED
IC88
+5V
RV8 NO ADJ
31 DRUM FREE SPEED
32 SPEED PG(A)
33 SPEED PG(B)
SPEED MMV
FF
2FSC
SPEED COUNTER
PWM
DRUM SPEED PWM 34
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D10
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LPF
MUTE
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LPF
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2-17A
M
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TP4
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40 PHASE PG
SW-P MMV
FF
1/4FSC
PHASE COUNTER
PWM
DRUM PHASE PWM 37
RV3 RF SW'ING POSITION
2 SW'ING POSITION(B)
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SW-P MMV
FF
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L:DRUM LOCK
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REEL SERVO
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48
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TP33
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PHASE COMP
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BPF
IC17
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RV21 PICTURE SPRITING COMPENSATE
RV20 PICTURE SPRITING COMPENSATE
IC112
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TP32
DRUM ϕ² SERVO
Q3
TP3
1 ϕ² ON/OFF
IC91
H.P.F V. SYNC KILLER
IC102
IC92
TP12
6 PB SYNC
V SYNC SEP
NOISE REJECT
REC
ASS→PB
ϕ² COMP
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IC98
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IC98
MMV
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TP1
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FRAMING
FRAMING ON
+5V
INT VD GEN
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V. BLKG PULSE 12
AFC OFF 42
1/2 VD
CAPSTAN SERVO
X1
FSC OSC
TP9
28 SC
IC83
MMV
IC83
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93
57
VANCE CONTROL

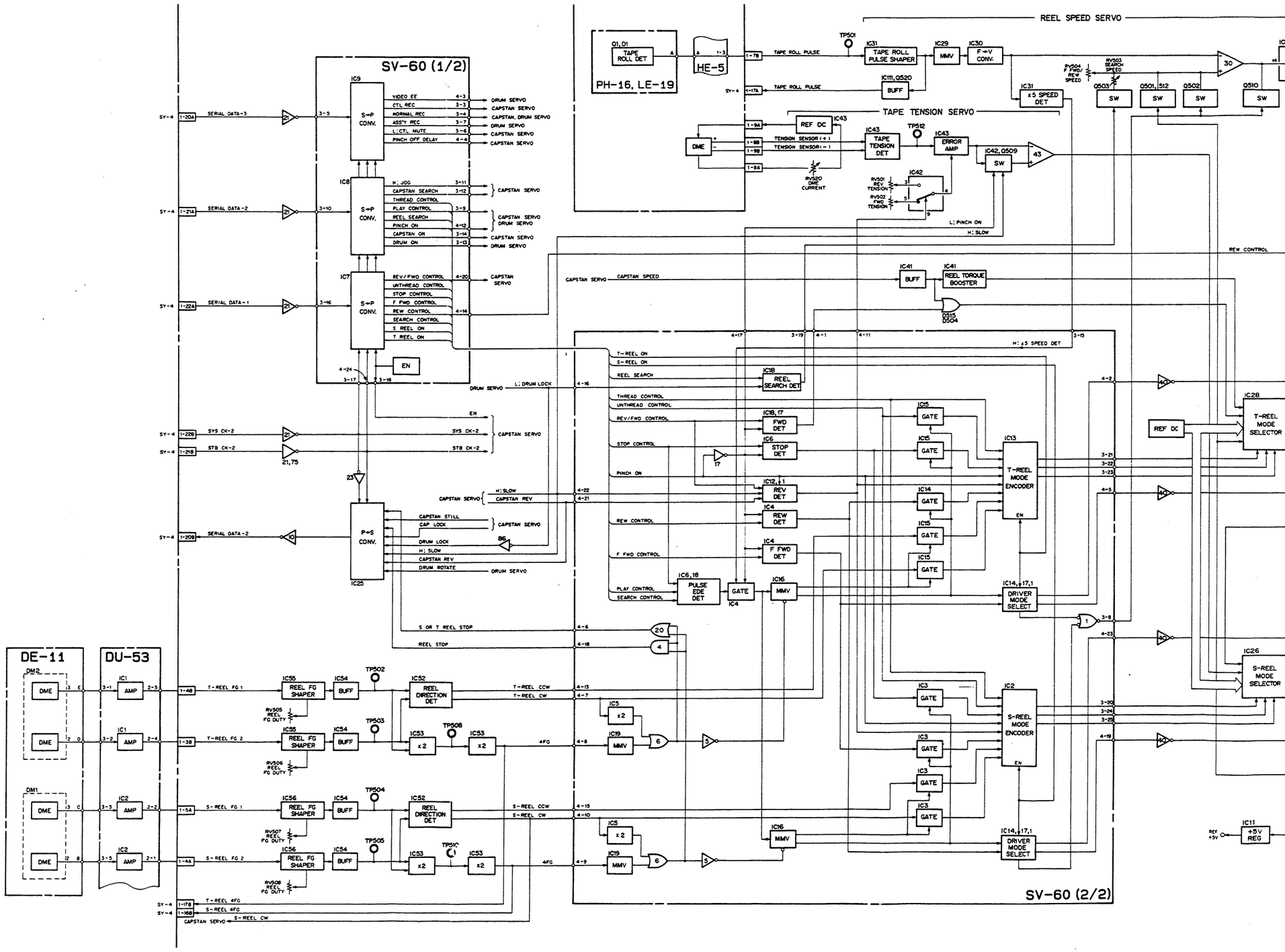
SV-55 (1/3)

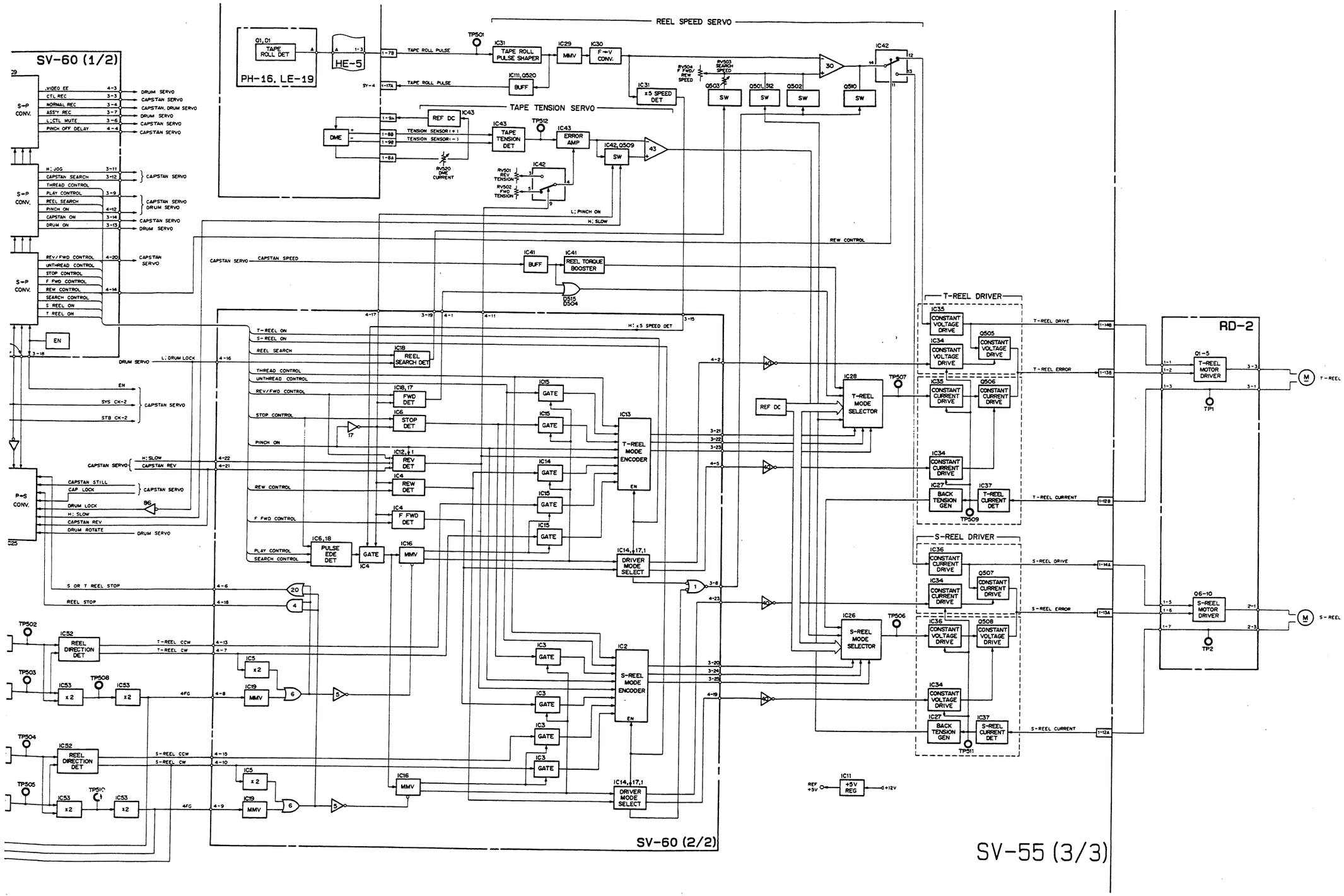
CAPSTAN SERVO



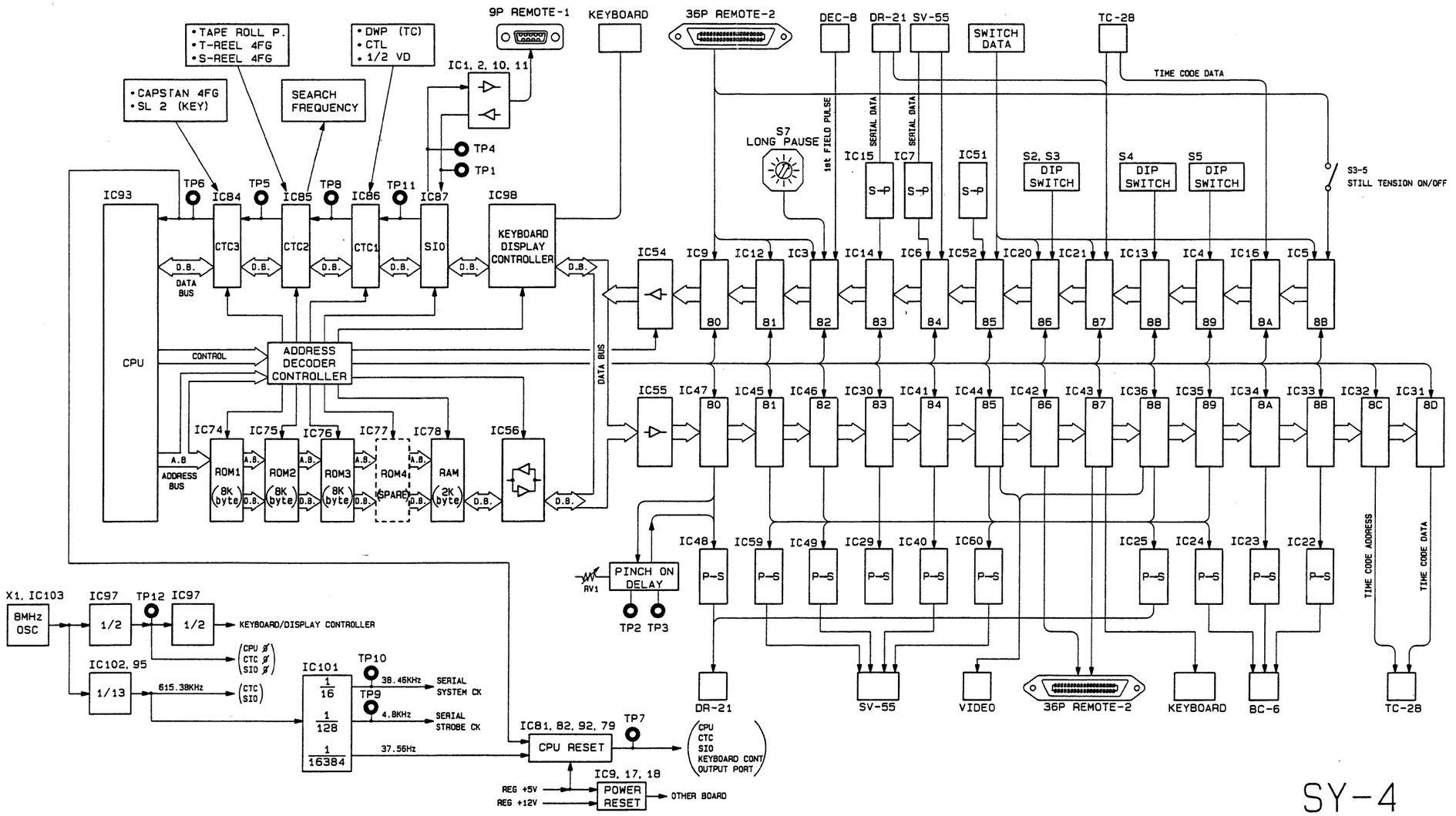

IC97(2/2)
CAPSTAN SPEED SERVO
CAPSTAN PHASE SERVO
CAPSTAN INSTANT STARTER
CAPSTAN MOTOR PWM / DRIVER
CAPSTAN SEARCH / BRAKE CONTROL
EDIT CTL GENERATOR
REC / PB AMP
IC80 FG SHAPER
IC104
R145,C71 HPF
R146,C74 HPF
IC65 CTL PB AMP
CTL SHAPER
IC71 CAPSTAN STOP SERVO
IC96 CAPSTAN STARTER
IC81 AMP
IC88
LPF
MUTE
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CAPSTAN MODE CONTROL LOGIC
CAPSTAN DIRECTION CONTROL LOGIC
IC38 MMV
IC60 BUFF
IC116 CAPSTAN DIRECTION DET
IC121 x2
IC126 BUFF
IC127
x24
24 VD COUNTER
FG COUNTER
COUNTER
INSTANT START SELECT
PHASE COMP
R88,C194 D/A CONV
SEARCH REF DC
IC124
IC110 S→P CONV.
X3 OSC
IC99
IC76,Q15 BUFF
Q25 MUTE
Q16 Q24 AMP
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Q22, IC57 BRAKE DET
IC84 x5 SPEED MMV
IC49
IC32 FF
IC47
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Q27
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FWD 1/10 REV 1/4 IC119
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1/14
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TP27
TRACKING
PB CTL
1/2VD
4 FG
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CAP SPEED
CAP PHASE PWM 20
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L: INSTANT START
PLAY CONTROL
PINCH ON
CAPSTAN ERROR
SYNCHRONIZE
CAPSTAN FREE SPEED
CAPSTAN SEARCH
REV/FWD CONT
CAPSTAN F/R CONTROL
CAPSTAN 4FG
CAPSTAN STILL
CAPSTAN SPEED
SEARCH FREQ
CAPSTAN ON
SHAPED CAP FG (A)
SHAPED CAP FG (B)
CAPSTAN REV
S REEL CW
TAPE DIRECTION
EDIT CTL
L: CTL MUTE
PINCH OFF DELAY
H: JOG
SHAPED CTL
REEL SERVO
CAPSTAN MOTOR
SV-55 (2/3)

REEL SERVO


SV-60 (1/2)
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HE-5
DE-11
DU-53
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SERIAL DATA-2
SERIAL DATA-1
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P→S CONV.
VIDEO EE
CTL REC
NORMAL REC
ASS'Y REC
L: CTL MUTE
PINCH OFF DELAY
H: JOG
CAPSTAN SEARCH
THREAD CONTROL
PLAY CONTROL
REEL SEARCH
PINCH ON
CAPSTAN ON
DRUM ON
REV/FWD CONTROL
UNTHREAD CONTROL
STOP CONTROL
F FWD CONTROL
REW CONTROL
SEARCH CONTROL
S REEL ON
T REEL ON
SYS CK-2
STB CK-2
CAPSTAN STILL
CAP LOCK
DRUM LOCK
H: SLOW
CAPSTAN REV
DRUM ROTATE
DRUM SERVO
CAPSTAN SERVO
CAPSTAN, DRUM SERVO
TAPE ROLL PULSE
TAPE ROLL DET
TAPE ROLL PULSE SHAPER
MMV
F→V CONV.
BUFF
x5 SPEED DET
SW
REF DC
TENSION SENSOR (+)
TENSION SENSOR (−)
TAPE TENSION DET
ERROR AMP
DME
DME CURRENT
REV TENSION
FWD TENSION
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H: SLOW
REW CONTROL
CAPSTAN SPEED
REEL TORQUE BOOSTER
H: ±5 SPEED DET
T-REEL ON
S-REEL ON
REEL SEARCH
REEL SEARCH DET
THREAD CONTROL
UNTHREAD CONTROL
REV/FWD CONTROL
FWD DET
STOP CONTROL
STOP DET
PINCH ON
REV DET
REW CONTROL
REW DET
F FWD CONTROL
F FWD DET
PULSE EDE DET
PLAY CONTROL
SEARCH CONTROL
GATE
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T-REEL MODE ENCODER
S-REEL MODE ENCODER
T-REEL MODE SELECTOR
S-REEL MODE SELECTOR
REF DC
REF +5V
+5V REG
S OR T REEL STOP
REEL STOP
T-REEL FG 1
T-REEL FG 2
S-REEL FG 1
S-REEL FG 2
REEL FG SHAPER
REEL DIRECTION DET
T-REEL CCW
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S-REEL CW
4FG
T-REEL 4FG
S-REEL 4FG
REEL FG DUTY
AMP
DME
DM1
DM2
MMV
x2
EN

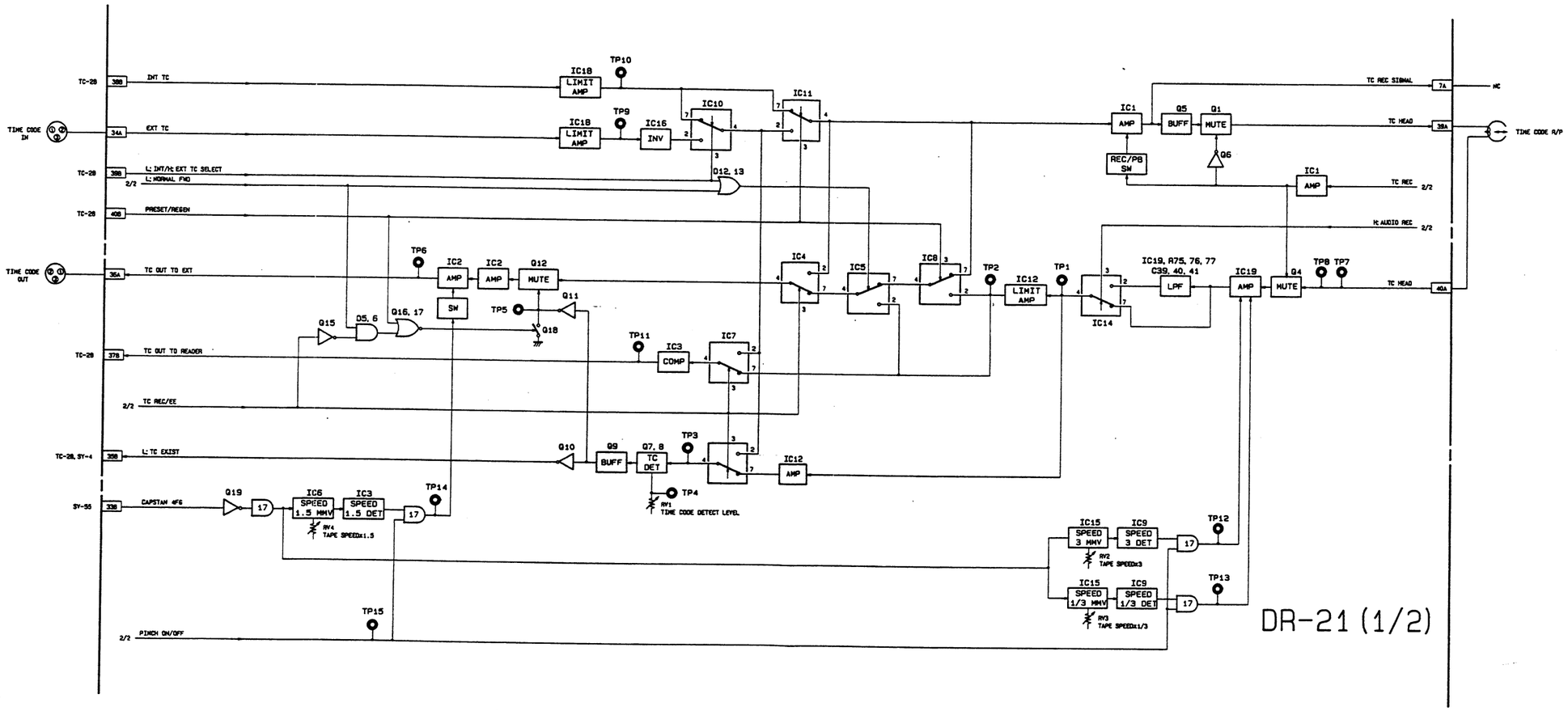

SV-60 (1/2)
S-P CONV.
VIDEO EE
CTL REC
NORMAL REC
ASSY REC
L: CTL MUTE
PINCH OFF DELAY
DRUM SERVO
CAPSTAN SERVO
H: JOG
CAPSTAN SEARCH
THREAD CONTROL
PLAY CONTROL
REEL SEARCH
PINCH ON
CAPSTAN ON
DRUM ON
REV/FWD CONTROL
UNTHREAD CONTROL
STOP CONTROL
F FWD CONTROL
REW CONTROL
SEARCH CONTROL
S REEL ON
T REEL ON
EN
DRUM SERVO
L: DRUM LOCK
SYS CK-2
STB CK-2
CAPSTAN SERVO
H: SLOW
CAPSTAN REV
CAPSTAN STILL
CAP LOCK
DRUM LOCK
DRUM ROTATE
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IC31
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Q503
Q501, 512
Q502
Q510
SW
REF DC
IC43
DME
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TENSION SENSOR (-)
RV520 DME CURRENT
TAPE TENSION DET
TP512
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RV501 REV TENSION
RV502 FWD TENSION
L: PINCH ON
H: SLOW
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Q504
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S-REEL ON
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FWD DET
STOP CONTROL
IC6
STOP DET
PINCH ON
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IC4
REW DET
F FWD CONTROL
F FWD DET
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GATE
IC4
IC16
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IC15
GATE
IC14
GATE
IC15
GATE
IC15
GATE
IC13
T-REEL MODE ENCODER
EN
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DRIVER MODE SELECT
S OR T REEL STOP
REEL STOP
20
4
1
IC28
T-REEL MODE SELECTOR
TPS07
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IC26
S-REEL MODE SELECTOR
TPS06
IC3
GATE
IC2
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MMV
TPS02
IC52
REEL DIRECTION DET
T-REEL CCW
T-REEL CW
TPS03
IC53
x2
TPS08
IC53
x2
4FG
IC5
x2
IC19
MMV
6
5
TPS04
IC52
REEL DIRECTION DET
S-REEL CCW
S-REEL CW
TPS05
IC53
x2
TPS10
IC53
x2
4FG
IC5
x2
IC19
MMV
6
5
T-REEL DRIVER
IC35
CONSTANT VOLTAGE DRIVE
IC34
CONSTANT VOLTAGE DRIVE
Q505
CONSTANT VOLTAGE DRIVE
IC35
CONSTANT CURRENT DRIVE
Q506
CONSTANT CURRENT DRIVE
IC34
CONSTANT CURRENT DRIVE
IC27
BACK TENSION GEN
TP509
IC37
T-REEL CURRENT DET
T-REEL DRIVE
T-REEL ERROR
T-REEL CURRENT
S-REEL DRIVER
IC36
CONSTANT CURRENT DRIVE
IC34
CONSTANT CURRENT DRIVE
Q507
CONSTANT CURRENT DRIVE
IC36
CONSTANT VOLTAGE DRIVE
Q508
CONSTANT VOLTAGE DRIVE
IC34
CONSTANT VOLTAGE DRIVE
IC27
BACK TENSION GEN
TP511
IC37
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S-REEL DRIVE
S-REEL ERROR
S-REEL CURRENT
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+5V REG
REF +5V
+12V
RD-2
Q1-5
T-REEL MOTOR DRIVER
TP1
T-REEL
Q6-10
S-REEL MOTOR DRIVER
TP2
S-REEL
SV-60 (2/2)
SV-55 (3/3)

SYSTEM CONTROL



SY-4

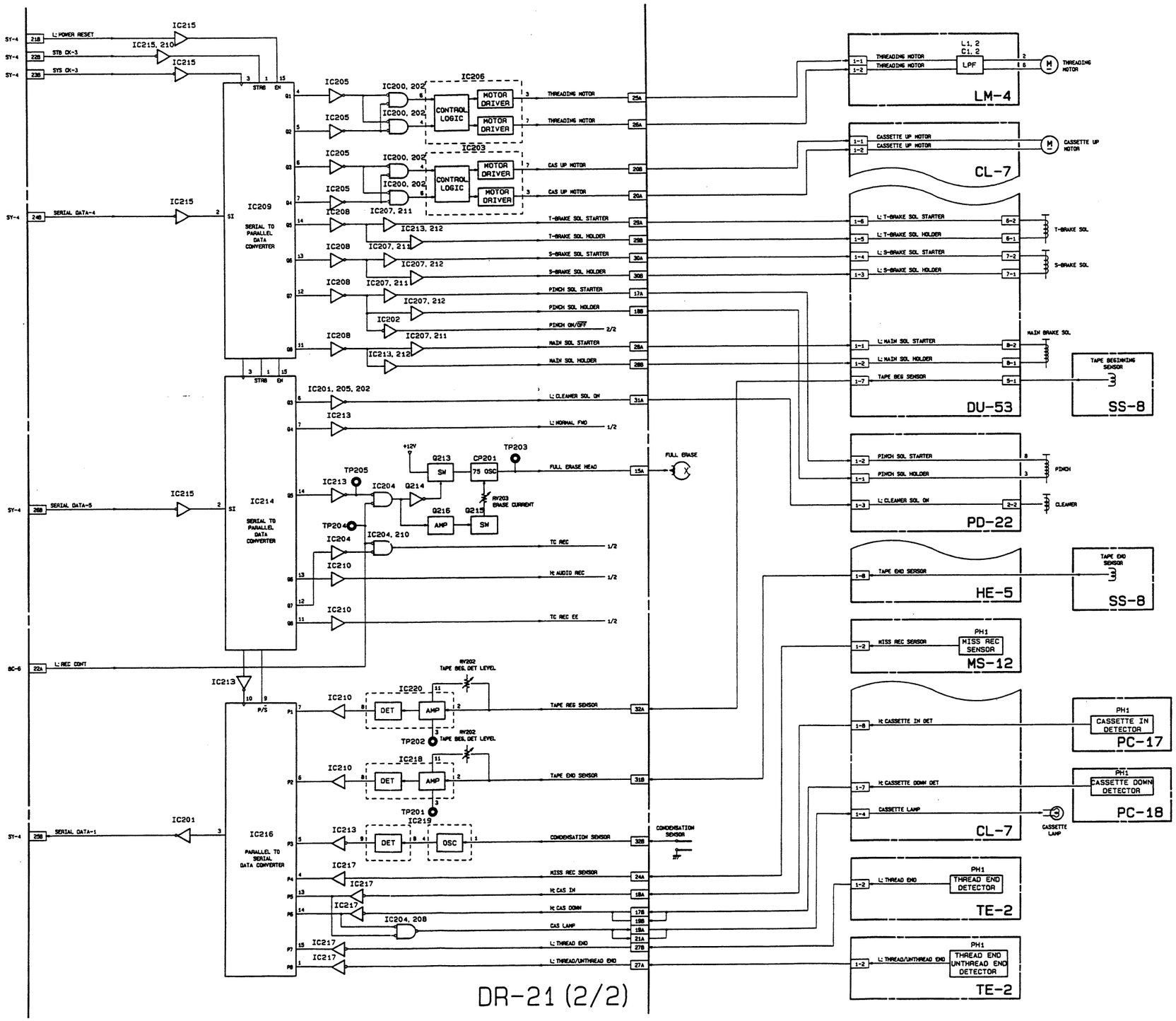
TIME CODE REC/PB AMPLIFIER



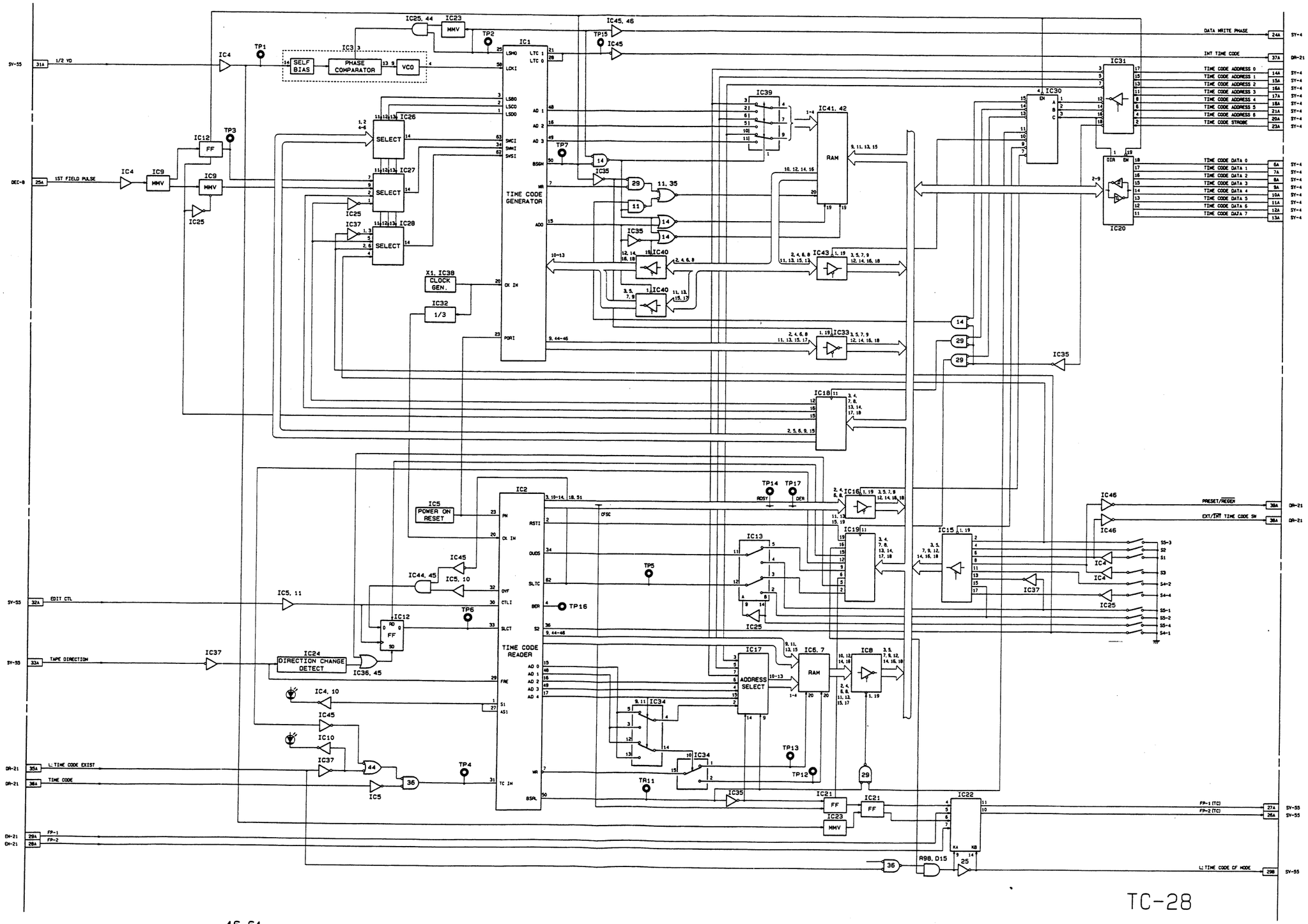
DR-21 (1/2)

MOTOR/SOLENOID DRIVER
TAPE/HUMID SENSOR

MOTOR/SOL. DRIVER MOTOR/SOL. DRIVER



TIME CODE GENERATOR



SECTION 17
SEMICONDUCTOR ELECTRODES

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uPD4069UBC	17-33
uPD4071BC	17-33
uPD4073BC	17-33
uPD4081BC	17-20
uPD4516BC	17-36
uPD4519BC	17-36
uPD4584BC	17-22
uPD5101LC-1	17-39
uPD8279C-5	17-39

Transistor

2N5457	17-40
2SA1005	17-40
2SA1015	17-40
2SA1026	17-40
2SA1048	17-40
2SA1115	17-40
2SA1175	17-40
2SA1175F	17-40
2SA1206	17-40
2SA530H	17-40
2SA711	17-40
2SA733	17-40
2SA772	17-40
2SA773	17-40
2SA844	17-40
2SB649	17-40
2SB649A	17-40
2SB733	17-40
2SB734	17-40
2SB739	17-40
2SB740	17-40
2SB856	17-40
2SC1061	17-40
2SC1275	17-40
2SC1363	17-40
2SC1364	17-40
2SC1636	17-40
2SC1963	17-40
2SC2009	17-40
2SC2011	17-40
2SC2291	17-40
2SC2458	17-40
2SC2603	17-40
2SC2669	17-40
2SC2724	17-40
2SC2771	17-40
2SC2785	17-40
2SC2787	17-40
2SC2878	17-40
2SC2901	17-40
2SC403C	17-40
2SC403SP	17-40
2SC634A	17-40
2SC641K	17-40
2SC689H	17-40
2SC945	17-40
2SD1134	17-40
2SD669	17-40
2SD669A	17-40
2SD773	17-40
2SD774	17-40
2SD788	17-40
2SD789	17-40
2SD880	17-40
2SD882	17-40
2SK152	17-40
2SK240	17-40
2SK389	17-40
2SK43	17-40
2SK523	17-40
J175	17-40
TPS601-B	17-41
TX429M	17-40

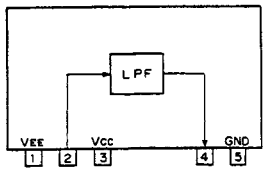
Diode

10E-2	17-41
10YD??	17-41
1N4148H	17-41
1S1555	17-41
1S1587	17-41
1S1925P	17-41
1S2076	17-41
1S2473	17-41
1SS119	17-41
1SS133	17-41
1SS148	17-41
1SS97	17-41
1SZ51	17-41
ERB12-02RK	17-41
ERB81-004	17-41
GL-5HD5	17-41
GP08	17-41
LN35BP	17-41
QSCH-1754	17-41
RD??E	17-41
SE301A	17-41
SIB01-02	17-41
TLO-124	17-41
TLR-321	17-41
US1035	17-41

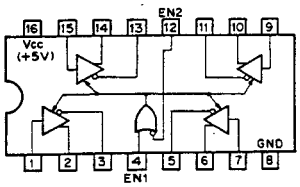
Others

DM208	17-41
DM211	17-41
PS4005	17-41

AFL25F15000G1 (MURATA)
BX-1343A (SONY)
ACTIVE LOW-PASS FILTER
— IMPRINTED SIDE VIEW —



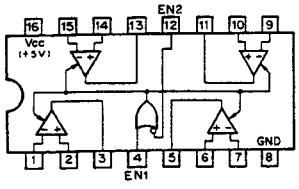
AM26LS31PC (ADVANCED MICRO DEVICE)
HIGH SPEED DIFFERENTIAL LINE DRIVER
— TOP VIEW —



FUNCTION TABLE		
EN2	EN1	OUTPUT
0	0	ENABLE
0	1	ENABLE
1	0	HI-Z
1	1	ENABLE

0 ; LOW LEVEL
1 ; HIGH LEVEL
HI-Z ; HIGH IMPEDANCE

AM26LS32PC (ADVANCED MICRO DEVICES)
HIGH SPEED DIFFERENTIAL LINE RECEIVER
— TOP VIEW —

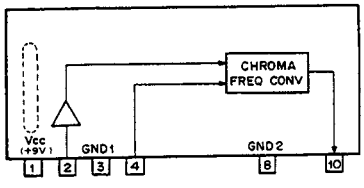


FUNCTION TABLE		
EN2	EN1	OUTPUT
0	0	ENABLE
0	1	ENABLE
1	0	HI-Z
1	1	ENABLE

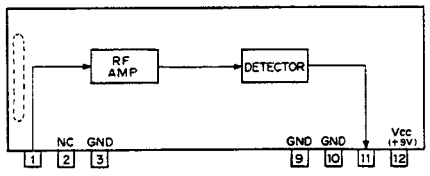
0 ; LOW LEVEL
1 ; HIGH LEVEL
HI-Z ; HIGH IMPEDANCE

	SENSE	INPUT VOLT
LS32	±200mV	±7V
LS33	±500mV	±15V

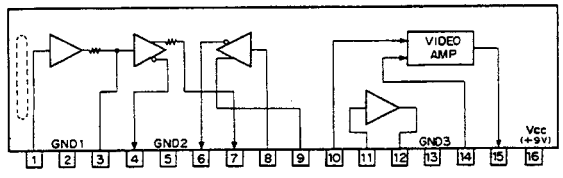
BX1056 (SONY)
CHROMA FREQUENCY CONVERTER
— REAR VIEW —



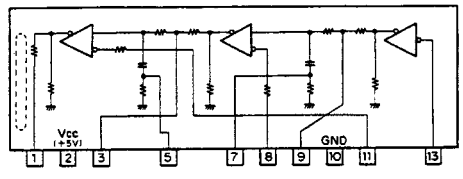
BX1098 (SONY)
RF METER DRIVER
— REAR VIEW —



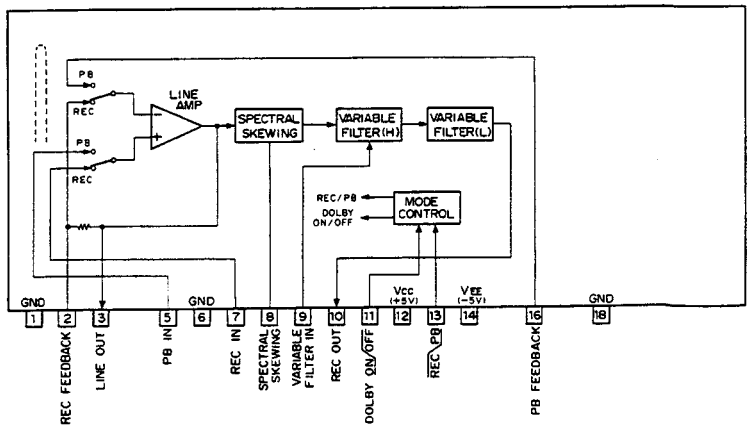
BX1099 (SONY)
ACTIVE EQUALIZER
— REAR VIEW —



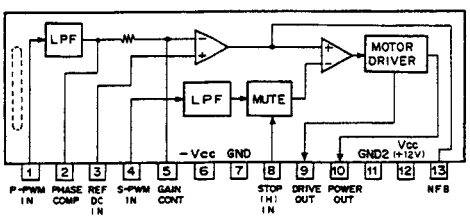
BX1140 (SONY)
HF AMP
— REAR VIEW —



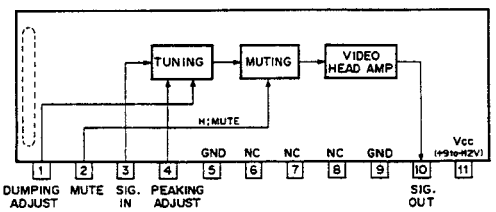
BX1152 (SONY)
DOLBY (C TYPE) NOISE REDUCTION SYSTEM
— REAR VIEW —



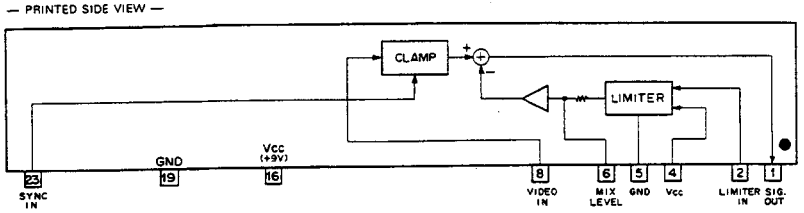
BX1154 (SONY)
DRUM PWM
— REAR VIEW —



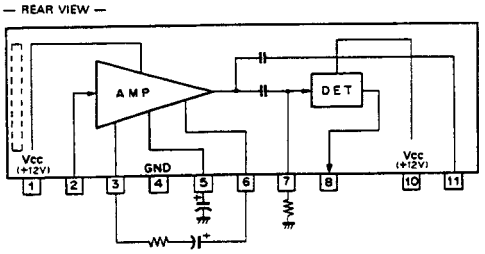
BX350 (SONY)
BX350A (SONY)
VIDEO HEAD AMP/MUTING
— REAR VIEW —



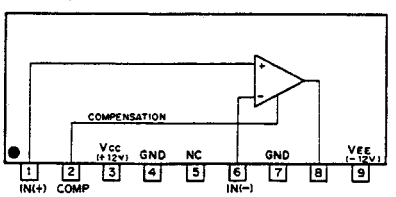
BX1282 (SONY)
VIDEO CLAMP/HIGH FREQUENCY COMPONENT PRE-EMPHASIS
— PRINTED SIDE VIEW —



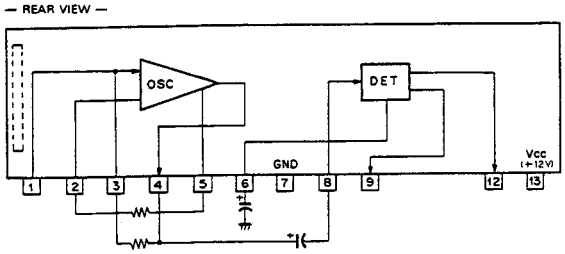
BX342 (SONY)
AMPLIFIER/DETECTOR
— REAR VIEW —



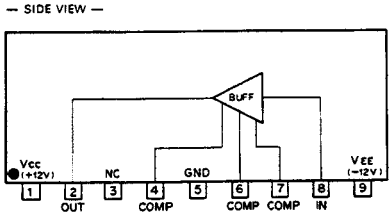
BX365A (SONY)
VIDEO AMPLIFIER
— SIDE VIEW —



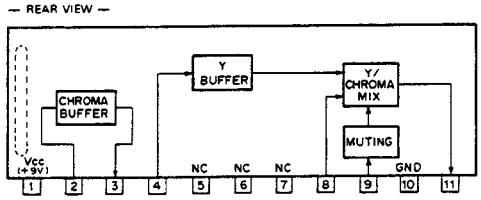
BX343 (SONY)
OSCILLATOR/DETECTOR
— REAR VIEW —



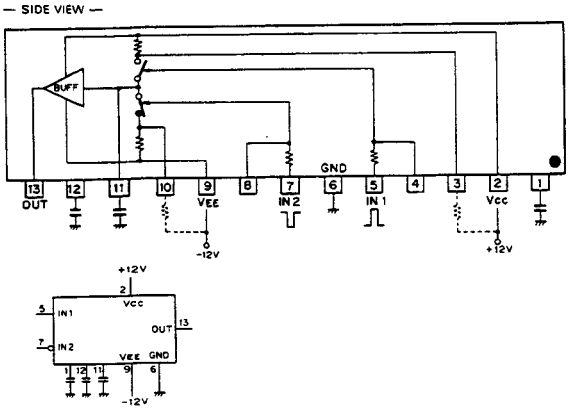
BX366A (SONY)
VIDEO BUFFER
— SIDE VIEW —



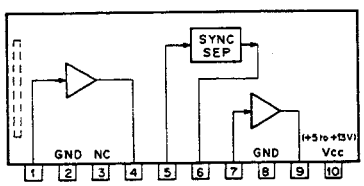
BX373 (SONY)
BX373A (SONY)
MIX AMP
— REAR VIEW —



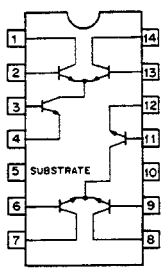
BX381 (SONY)
PHASE COMPARATOR
— SIDE VIEW —



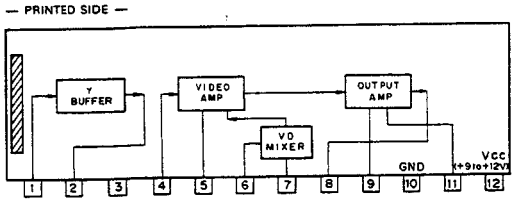
BX3915A (SONY)
SYNC SEPARATOR
— PRINTED SIDE —



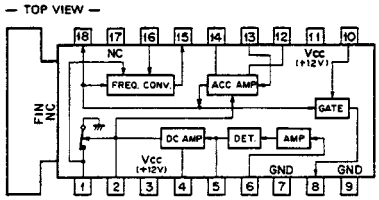
CA3054 (RCA)
DIFFERENTIAL AMPLIFIER
— TOP VIEW —



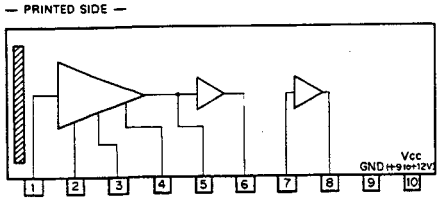
BX388 (SONY)
VIDEO AMP/VD MIXER
— PRINTED SIDE —



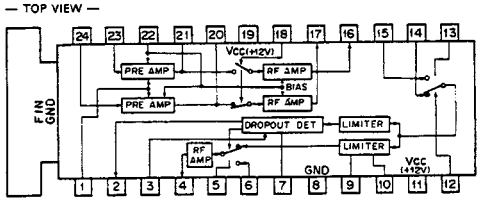
CX133A (SONY)
GAIN CONTROL/BALANCED MODULATOR
— TOP VIEW —



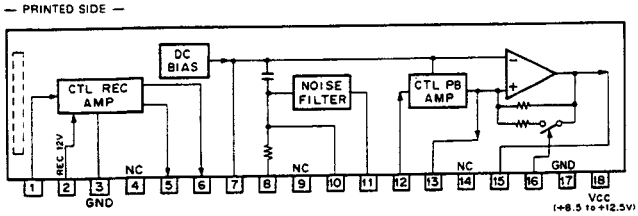
BX389 (SONY)
VIDEO AMPLIFIER
— PRINTED SIDE —



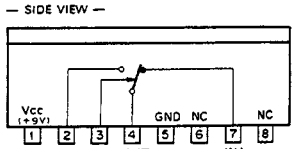
CX134A (SONY)
HEAD AMP/DROPOUT COMPENSATOR
— TOP VIEW —



8X3914 (SONY)
CTL REC/PB AMPLIFIER
— PRINTED SIDE —



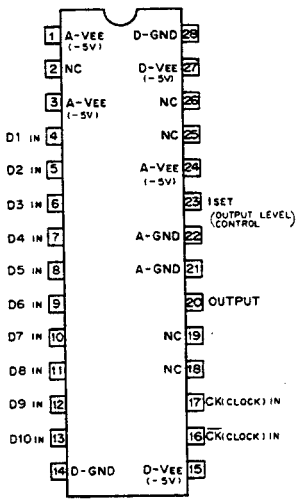
CX20061 (SONY)
ANALOG SWITCH
— SIDE VIEW —

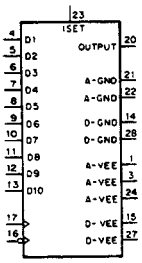


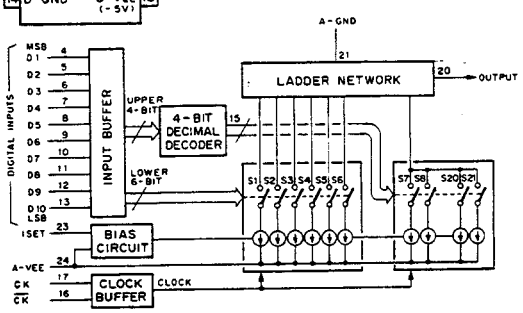
CONT.	SW
0	
1	

0 ; LOW LEVEL
1 ; HIGH LEVEL

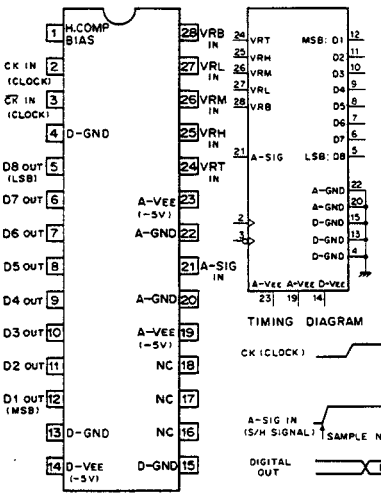
CX20051 (SONY)
CX20051A (SONY)
10-BIT D/A CONVERTER (ECL INPUT)
— TOP VIEW —







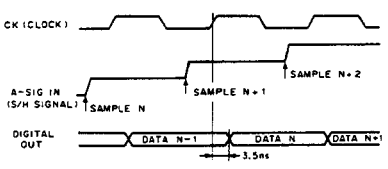
CX20052 (SONY)
CX20052A (SONY)
8-BIT FEED-FORWARD TYPE A/D CONVERTER (ECL OUTPUT)
— TOP VIEW —



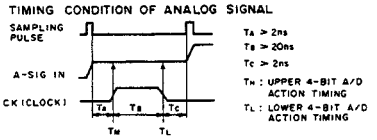
OUTPUT CODING

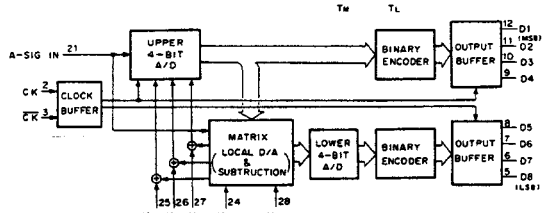
STEP	RANGE EX. 2.000V FULL SCALE	OUTPUTS MSB LSB
000	0.0000V	11111111
001	−0.0078V	11111110
⋮	⋮	⋮
127	−0.9961V	10000000
128	−1.0039V	01111111
129	−1.0118V	01111110
⋮	⋮	⋮
255	−2.0000V	00000000

TIMING DIAGRAM

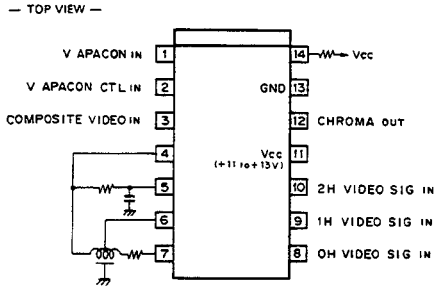


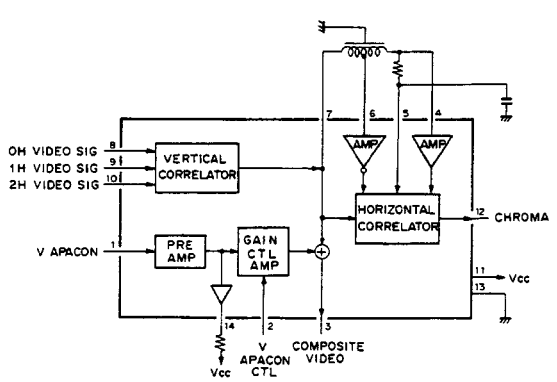
TIMING CONDITION OF ANALOG SIGNAL



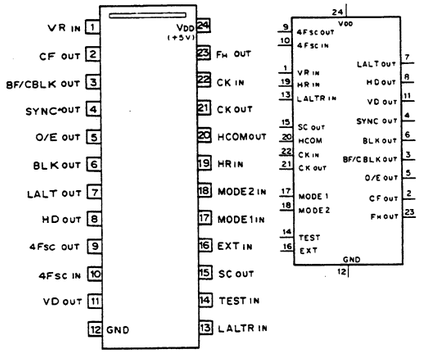


CX22013 (SONY)
DYNAMIC COMB FILTER
— TOP VIEW —





CX773A (SONY)
CX773A-1 (SONY)
C-MOS SYNC GENERATOR (NTSC, PAL-M, PAL SECAM)
— TOP VIEW —



O/E : ODD/EVEN FIELD
CF : COLOR FRAME PULSE
HCOM : H COMPARATOR

SYSTEM	4Fsc	CLOCK
NTSC	910 FH	910FH
PAL	1135 FH+2Fv	908FH
PALM	909FH	910FH
SECAM	——	908FH

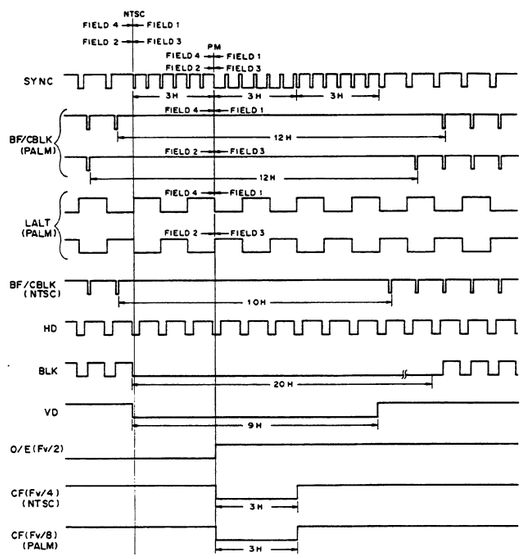
INPUTS MODE 1	INPUTS MODE 2	SYSTEM
0	0	NTSC
0	1	SECAM
1	0	PALM
1	1	PAL

0 ; LOW LEVEL (GND)
1 ; HIGH LEVEL (VDD)

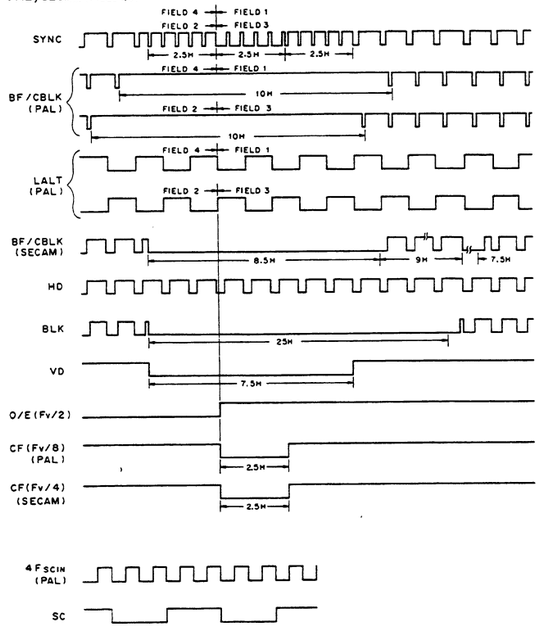
INPUTS EXT	INPUTS TEST	FUNCTION
0	0	INTERNAL
0	1	INVALID
1	0	EXT
1	1	TEST

TEST "0" OPEN (INTERNALLY PULLED DOWN)

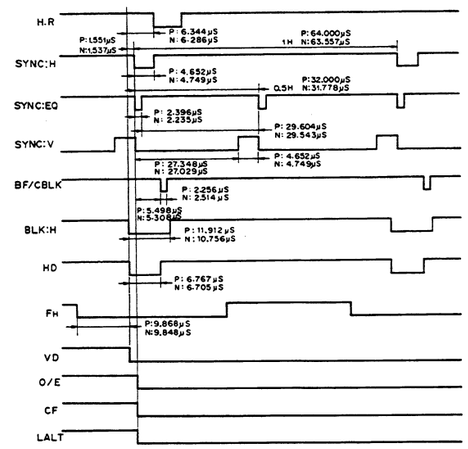
NTSC, PAL-M (FIELD 1,3)



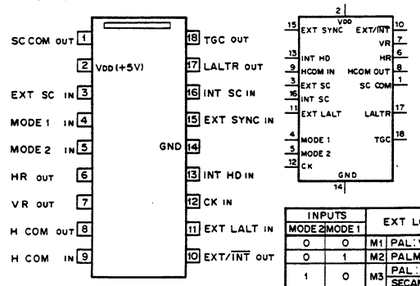
PAL, SECAM (FIELD 1,3)



P:PAL, SECAM
N:NTSC, PALM

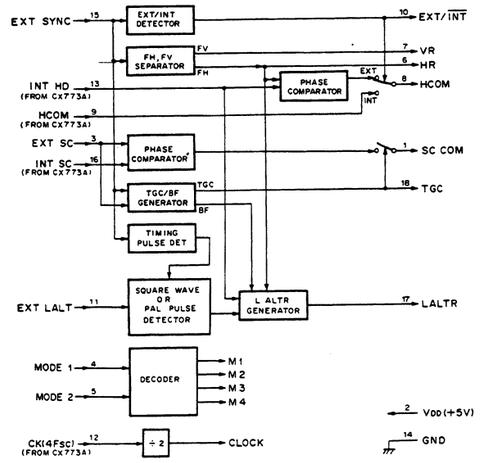


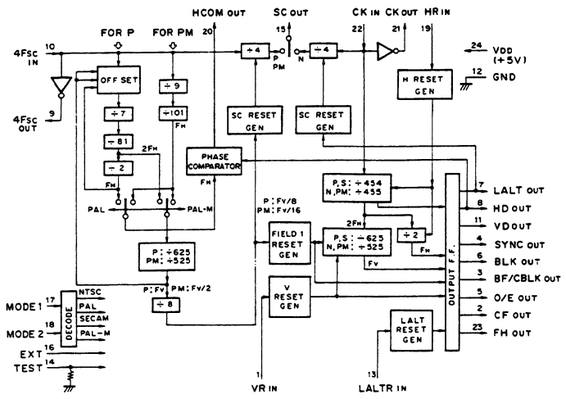
CX7903 (SONY)
C-MOS GENLOCK DRIVER FOR CX773A
— TOP VIEW —



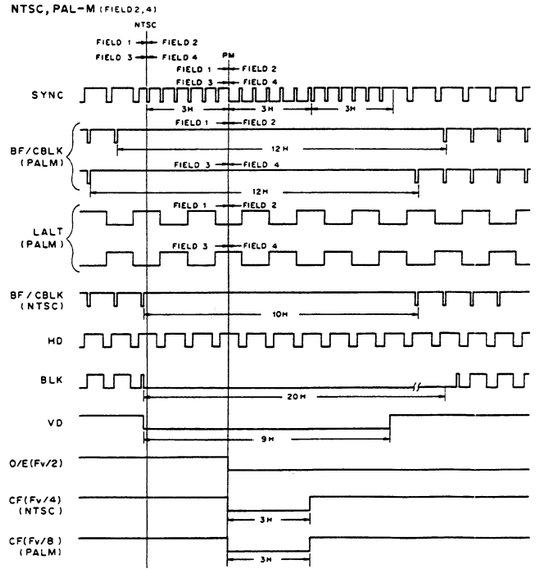
INPUTS MODE 2	INPUTS MODE 1	EXT LOCK MODE	
0	0	M1	PAL:VBS
0	1	M2	PALM:VBS
1	0	M3	PAL:VS/SC/LALT
			SECAM:VS/SC/LALT
1	1	M4	NTSC:VBS
			NTSC:VS/SC
			PALM:VS/SC/LALT

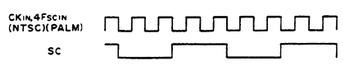
0 ; LOW LEVEL
1 ; HIGH LEVEL



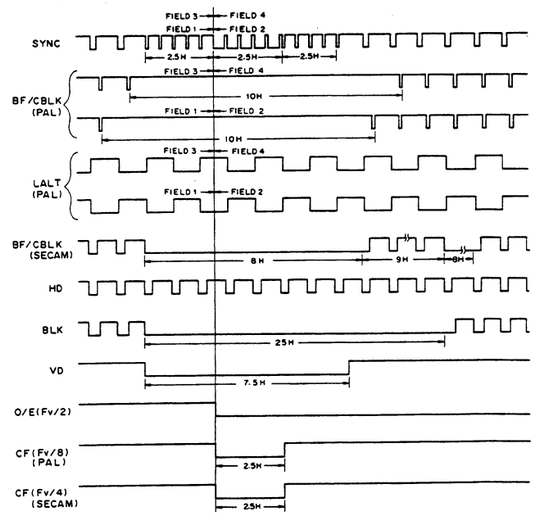


NTSC, PAL-M (FIELD 2,4)

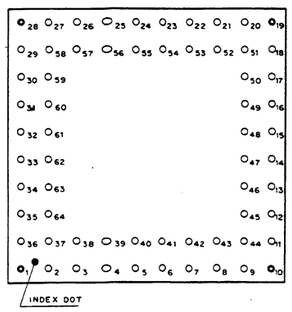


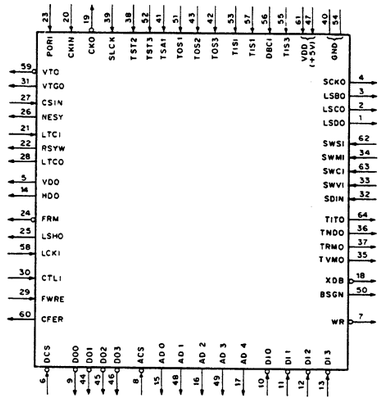


PAL, SECAM (FIELD 4,2)



CX7907A (SONY)
C-MOS TIME CODE GENERATOR
— TOP VIEW —





PIN ASSIGNMENT

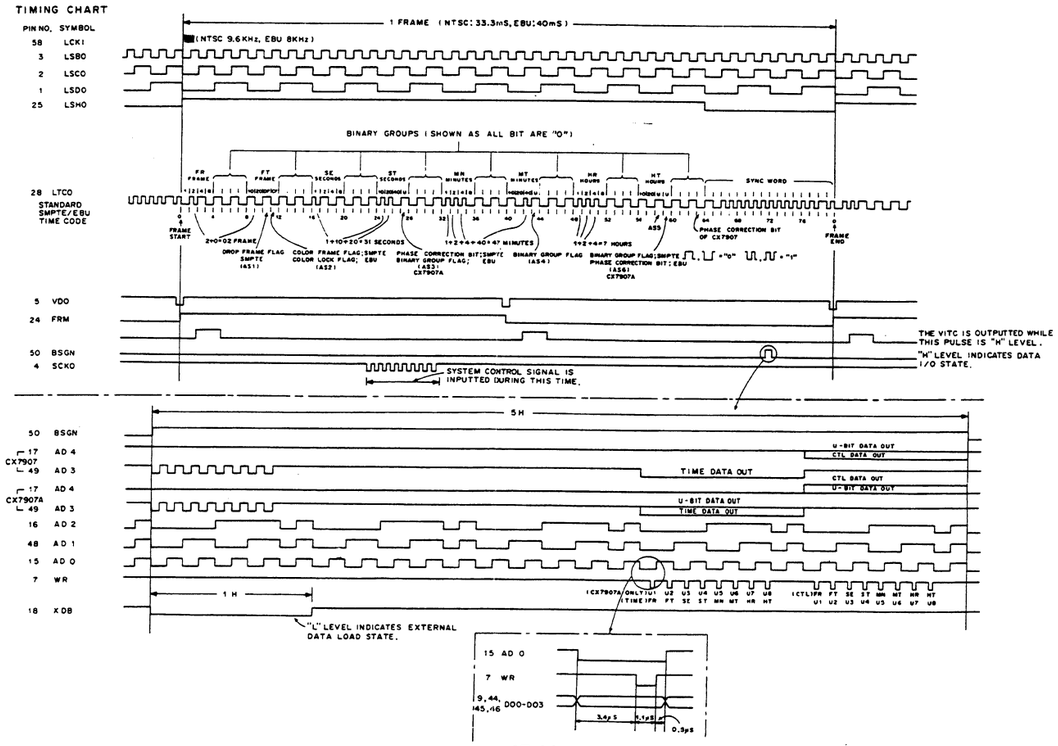
Pin No.	IN	OUT	SYMBOL
1		o	LSDO
2		o	LSCO
3		o	LSBO
4		o	SCKO
5		o	VDO
6	o		DCS
7		o	WR
8	o		ACS
9		o	DO0
10	o		DI0
11	o		DI1
12	o		DI2
13	o		DI3
14		o	HDO
15		o	AD0
16		o	AD2

Pin No.	IN	OUT	SYMBOL
17		o	AD4
18		o	XDB
19		o	CKO
20	o		CKIN
21	o		LTCI
22		o	RSYW
23	o		PORI
24		o	FRM
25		o	LSHO
26		o	NESY
27	o		CSIN
28		o	LTCO
29	o		FWRE
30	o		CTLI
31		o	VTGO
32	o		SDIN

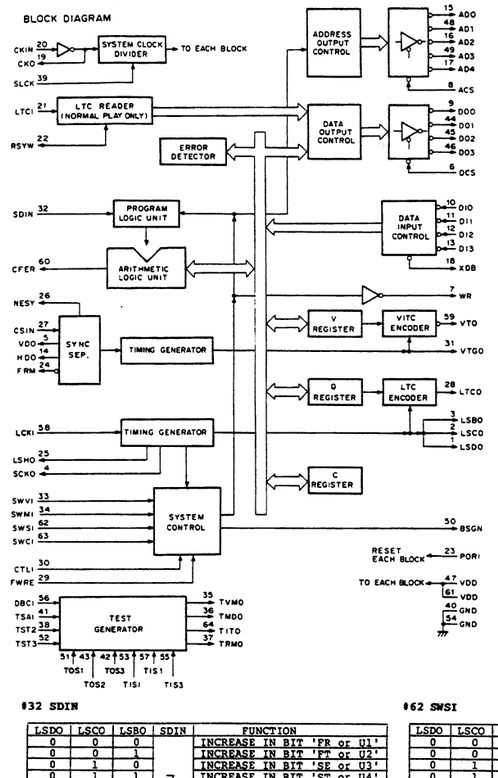
Pin No.	IN	OUT	SYMBOL
33	o		SWVI
34	o		SWMI
35		o	TVMO
36		o	TNDO
37		o	TRMO
38	o		TST2
39	o		SLCK
40		o	GND
41	o		TSAI
42	o		TOS3
43	o		TOS2
44		o	DO1
45		o	DO2
46		o	DO3
47	o		VDD(+5V)
48		o	AD1

Pin No.	IN	OUT	SYMBOL
49		o	AD3
50		o	BSGN
51	o		TOS1
52	o		TST3
53	o		TIS1
54		o	GND
55	o		TIS3
56	o		DBCI
57	o		TIS1
58	o		LCKI
59		o	VTO
60		o	CFER
61	o		VDD(+5V)
62	o		SWSI
63	o		SWCI
64		o	TITO

TIMING CHART



BLOCK DIAGRAM



FUNCTIONAL PIN DEFINITION

Pin No.	SYMBOL	DESCRIPTION
8	ACS	ADDRESS LINE CHIP SELECT INPUT
15	AD0	ADDRESS DATA OUTPUT
48	AD1	
16	AD2	
49	AD3	
17	AD4	
50	BSGN	BUSY GENERATOR OUTPUT
60	CFER	COLOR FRAME ERROR FLAG OUTPUT
20	CKIN	SYSTEM CLOCK INPUT
19	CKO	CLOCK OUTPUT
27	CSIN	COMPOSITE SYNC INPUT
30	CTLI	CTL(TIMER) SIGNAL INPUT (↑)
6	DCS	DATA LINE CHIP SELECT INPUT (NEGATIVE-LOGIC)
10	DI0	DATA BUS INPUT (NEGATIVE-LOGIC)
11	DI1	
12	DI2	
13	DI3	
9	DO0	DATA BUS OUTPUT (NEGATIVE-LOGIC)
44	DO1	
45	DO2	
46	DO3	
24	FRM	FRAME SIGNAL OUTPUT (NEGATIVE-LOGIC)
29	FWRE	CTL DIRECTION INPUT
14	HDO	HORIZONTAL SYNC DRIVE OUTPUT
58	LCKI	LTC CLOCK INPUT (SWPTS 9.6kHz/EBU 8kHz)
3	LSBO	LTC SYNCHRONOUS SIGNAL B OUTPUT
2	LSCO	LTC SYNCHRONOUS SIGNAL C OUTPUT
1	LSDO	LTC SYNCHRONOUS SIGNAL D OUTPUT
25	LSHO	LTC SYNCHRONOUS SIGNAL H OUTPUT
21	LTCI	LTC INPUT
28	LTCO	LTC SIGNAL OUTPUT
26	NESY	LOST-SYNC FLAG OUTPUT
23	PORI	POWER ON RESET INPUT
22	RSYW	READ SYNC WORD OUTPUT
4	SCKO	SWITCHES SIGNAL IN CLOCK OUTPUT
32	SDIN	SERIAL DATA INPUT
39	SLCK	SELECT CLOCK INPUT
63	SWCI	SWITCHES SIGNAL C INPUT
34	SWMI	SWITCHES SIGNAL M INPUT
62	SWSI	SWITCHES SIGNAL S INPUT
33	SWVI	SWITCHES SIGNAL V INPUT
5	VDO	VERTICAL SYNC DRIVE OUTPUT
31	VTGO	VITC GATE SIGNAL OUTPUT
59	VTO	VITC SIGNAL OUTPUT (NEGATIVE-LOGIC)
7	WR	WRITE SIGNAL OUTPUT (NEGATIVE-LOGIC)
18	XDB	EXTERNAL DATA BUS IN FLAG OUTPUT (NEGATIVE-LOGIC)
47	VDD	POWER LINE (+5V)
61	VDD	
40	GND	GND LINE
54	GND	
56	DBCI	TEST INPUT (TO BE CONNECTED WITH GND)
57	TIS1	
55	TIS3	
53	TISI	
51	TOS1	
43	TOS2	
42	TOS3	
41	TSAI	
38	TST2	
52	TST3	
64	TITO	TEST OUTPUT (TO BE LEFT OPEN)
36	TMDO	
37	TRMO	
35	TVMO	

#32 SDIN

LSDO	LSCO	LSBO	SDIN	FUNCTION
0	0	0		INCREASE IN BIT 'FR or U1'
0	0	1		INCREASE IN BIT 'FT or U2'
0	1	0		INCREASE IN BIT 'SE or U3'
0	1	1		INCREASE IN BIT 'ST or U4'
1	0	0		INCREASE IN BIT 'MN or U5'
1	0	1		INCREASE IN BIT 'MT or U6'
1	1	0		INCREASE IN BIT 'HR or U7'
1	1	1		INCREASE IN BIT 'HT or U8'

NOTE;INFLUENCED BIT IS DECIDED BY FIRST 2 BITS OF SWCI.

#33 SWVI

LSDO	LSCO	LSBO	SWVI	FUNCTION
0	0	0	SW1A↑	VITC POSITION SELECT A
0	0	1	SW1B↑	
0	1	0	SW1C↑	
0	1	1	SW1D↑	
1	0	0	SW2A↑	VITC POSITION SELECT B
1	0	1	SW2B↑	
1	1	0	SW2C↑	
1	1	1	SW2D↑	

↑;VITC POSITION SELECT

SW1D SW2D	SW1C SW2C	SW1B SW2B	SW1A SW2A	INSERTION LINE NTSC	INSERTION LINE PAL,SECAM
0	0	0	0	LINE 25	LINE 22,335
0	0	0	1	24	21,334
0	0	1	0	23	20,333
0	0	1	1	22	19,332
0	1	0	0	21	18,331
0	1	0	1	20	17,330
0	1	1	0	19	16,329
0	1	1	1	18	15,328
1	0	0	0	17	14,327
1	0	0	1	16	13,326
1	0	1	0	15	12,325
1	0	1	1	14	11,324
1	1	0	0	13	10,323
1	1	0	1	12	9,322
1	1	1	0	11	8,321
1	1	1	1	10	7,320

#34 SWMI

LSDO	LSCO	LSBO	SWMI	FUNCTION
0	0	0	x	INSERT SWMI DATA INTO BIT 'AS1'(NEGATIVE-LOGIC)
0	0	1	x	INSERT SWMI DATA INTO BIT 'AS2'(NEGATIVE-LOGIC)
0	1	0	x	INSERT SWMI DATA INTO BIT 'AS3'(NEGATIVE-LOGIC)
0	1	1	x	INSERT SWMI DATA INTO BIT 'AS4'(NEGATIVE-LOGIC)
1	0	0	x	INSERT SWMI DATA INTO BIT 'AS5'(NEGATIVE-LOGIC)
1	0	1	x	INSERT SWMI DATA INTO BIT 'AS6'(NEGATIVE-LOGIC)
1	1	0	f	COLOR FRAME LOCK IN FIELD 1
1	1	1	0	COLOR FRAME OFF
1	1	1	1	COLOR FRAME ON

X;DON'T CARE.

#62 SWSI

LSDO	LSCO	LSBO	SWSI	FUNCTION
0	0	0	FBS1*	VITC FIELD MARK/ LTC PHASE CORRECTION POSITION SELECT
0	0	1	FBS2*	
0	1	0	FBS3*	
0	1	1	0	PHASE CORRECTION ON
0	1	1	1	PHASE CORRECTION OFF
1	0	0	S1**	SIGNAL FORMAT SELECT
1	0	1	S2**	
1	1	0	S4**	
1	1	1	x	-

x;DON'T CARE.

*;VITC FIELD MARK/LTC PHASE CORRECTION POSITION SELECT

FBS3	FBS2	FBS1	FIELD MARK POSITION	LTC BIT No.
0	0	0	AS1	10
0	0	1	AS2	11
0	1	0	AS3	27
0	1	1	AS4	43
1	0	0	AS5	58
1	0	1	AS6	59
1	1	0	-	-
1	1	1	-	-

NOTE;LTC PHASE CORRECTION BIT OF CX7907 IS FIXED ON BIT-63.

**;SIGNAL FORMAT SELECT

S4	S2	S1	FORMAT	FRAME
0	0	0	FILM	24
0	0	1	NOT ALLOWED	-
0	1	x		
1	0	0	PAL,SECAM	25
1	0	1	NOT ALLOWED	-
1	1	0	NTSC NDF	30
1	1	1	NTSC DF	30

DF;DROP FRAME
NDF;NON DROP FRAME
x;DON'T CARE.

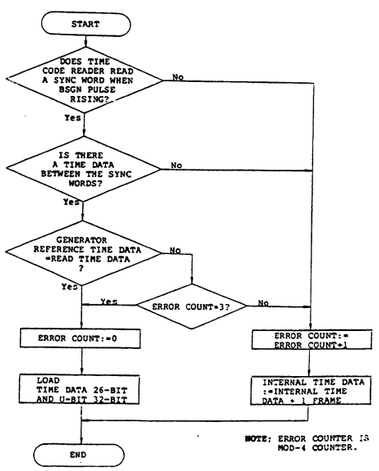
0;LOW LEVEL
1;HIGH LEVEL

#63 SWCI

LSDO	LSCO	LSBO	SWCI	FUNCTION
0	0	0	0	U-BIT IN/OUT DATA SELECT*1
0	0	0	1	TIME
0	0	1	0	CTL
0	0	1	1	TIME/U-BIT
0	1	0	x	-
0	1	1	0	DATA RESET ON*2
0	1	1	1	DATA RESET OFF
1	0	0	0	TIME DATA HOLD
1	0	0	1	TIME DATA RUN
1	0	1	↑	EXTERNAL DATA LOAD*2
1	1	0	0	EXTRAPOLATION ON
1	1	1	1	EXTRAPOLATION OFF
1	1	1	x	-

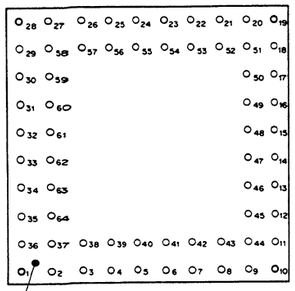
x; DON'T CARE.
*1;REFER TO TIMING CHART(DATA OUT).
*2;INFLUENCED DATA IS DECIDED BY FIRST 2 BITS OF SWCI.

ERROR BYPASS ALGORITHM



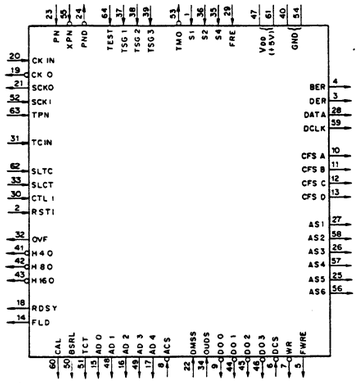
NOTE; ERROR COUNTER IS MOD-4 COUNTER.

CX7912 (SONY)
CX7912A (SONY)
C-MOS TIME CODE READER
— TOP VIEW —



PIN ASSIGNMENT

PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
1	○		S1	17		○	AD 4	33	○		SLCT	49		○	AD 3
2	○		RSTI	18		○	RDSY	34	○		OUDS	50		○	BSRL
3		○	DER	19		○	CK O	35	○		S4	51		○	TCT
4		○	BER	20	○		CK IN	36	○		S2	52	○		SCKI
5		○	FWRE	21		○	SCKO	37	○		TSG 1	53		○	TMO
6	○		DCS	22	○		DMSS	38	○		TSG 2	54		○	GND
7		○	WR	23	○		PN	39	○		TSG 3	55	○		XPN
8	○		ACS	24		○	PND	40		○	GND	56		○	AS6
9		○	DO 0	25		○	AS 5	41		○	H 4 0	57		○	AS4
10		○	CFS A	26		○	AS 3	42		○	H 8 0	58		○	AS2
11		○	CFS B	27		○	AS 1	43		○	H 16 0	59		○	DCLK
12		○	CFS C	28		○	DATA	44		○	DO 1	60		○	CAL
13		○	CFS D	29	○		FRE	45		○	DO 2	61	○		VDD(+5V)
14		○	FLD	30	○		CTL 1	46		○	DO 3	62	○		SLTC
15		○	AD 0	31	○		TC IN	47	○		VDD(+5V)	63	○		TPN
16		○	AD 2	32		○	OVF	48		○	AD 1	64	○		TEST



MODE SELECT

SLCT	SLTC	MODE
0	0	AUTO
0	1	TIME CODE
1	0	CTL
1	1	AUTO

CTL COUNT

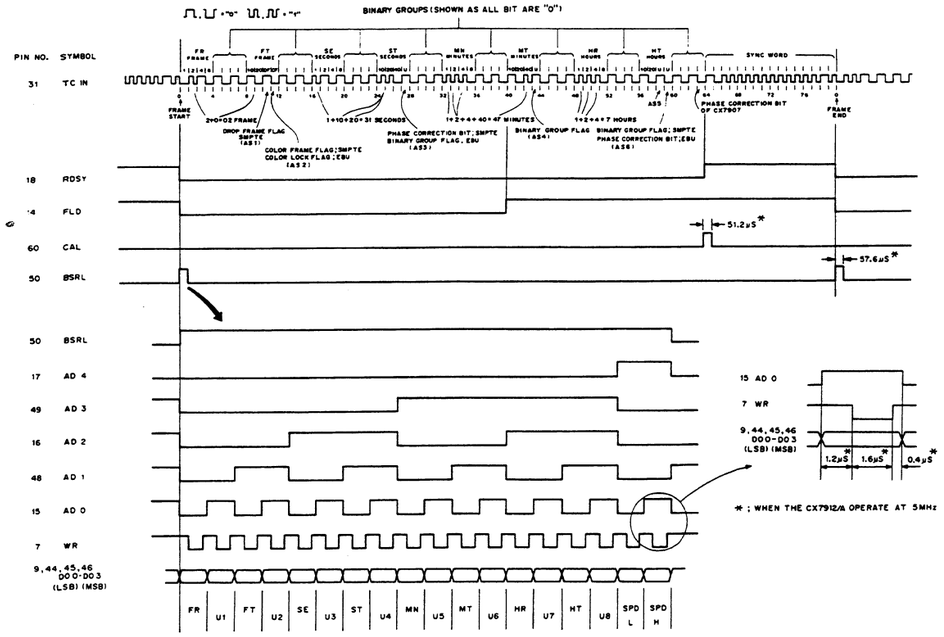
FRE	RSTI	COUNT
0	X	DOWN COUNT
-	X	UP COUNT
X	⌐	RESET

SIGNAL FORMAT SELECT

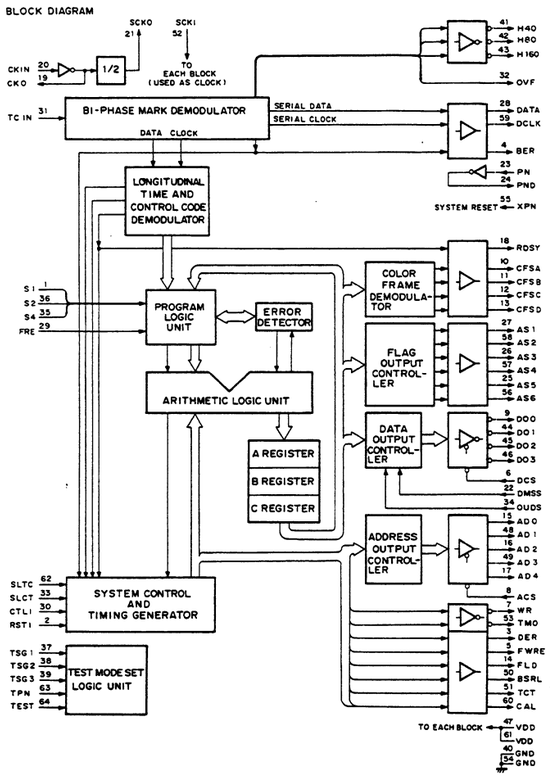
S4	S2	S1	FORMAT	FRAME
0	0	0	FILM	24
0	0	1	NOT ALLOWED	—
0	1	0		
0	1	1		
1	0	0	PAL, SECAM	25
1	0	1	NOT ALLOWED	—
1	1	0	NTSC (NON DROP FRAME)	30
1	1	1	NTSC (DROP FRAME)	30

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE

TIMING CHART



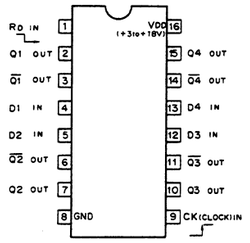
BLOCK DIAGRAM

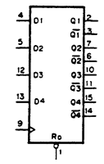


FUNCTIONAL PIN DEFINITION

Pin No.	SYMBOL	DESCRIPTION
8	ACS	ADDRESS LINE OUTPUT ENABLE (NEGATIVE-LOGIC)
15	AD0	ADDRESS DATA OUTPUT
48	AD1	
16	AD2	
49	AD3	
17	AD4	
27	AS1	PARALLEL DATA OUTPUT
58	AS2	
26	AS3	
57	AS4	
25	AS5	
56	AS6	
4	BER	BI-PHASE MARK ERROR (BIT ERROR) OUTPUT
50	BSRL	DATA OUT FLAG OUTPUT
60	CAL	CALCULATE OUT FLAG OUTPUT
10	CFSA	DEMODULATED COLOR FRAME OUTPUT
11	CFSB	
12	CFSC	
13	CFSD	
20	CKIN	CLOCK INPUT
19	CKO	CLOCK OUTPUT (NEGATIVE-LOGIC)
30	CTLI	CTL SIGNAL INPUT (⌐)
28	DATA	DEMODULATED SERIAL DATA OUTPUT
59	DCLK	DEMODULATED CLOCK OUTPUT
6	DCS	DATA LINE OUTPUT ENABLE (NEGATIVE-LOGIC)
3	DER	DEMODULATE DATA ERROR OUTPUT
22	DMSS	ASSIGNED DATA SELECT
9	DO0	DATA OUTPUT (NEGATIVE-LOGIC)
44	DO1	
45	DO2	
46	DO3	
14	FLD	FIELD DATA OUTPUT
29	FRE	CTL DIRECTION SIGNAL INPUT
5	FWRE	DEMODULATE DIRECTION SIGNAL OUTPUT
41	H40	SPEED RANGE FLAG 4 OUTPUT (NEGATIVE-LOGIC)
42	H80	SPEED RANGE FLAG 8 OUTPUT (NEGATIVE-LOGIC)
43	H160	SPEED RANGE FLAG 16 OUTPUT (NEGATIVE-LOGIC)
34	OUDS	ERROR BYPASS ON/OFF SELECT
32	OVF	OVERFLOW FLAG OUTPUT
23	PN	POWER ON SIGNAL INPUT
24	PND	POWER ON SIGNAL OUPUT (NEGATIVE-LOGIC)
18	RDSY	READ SYNC WORD DATA OUTPUT
2	RSTI	CTL TIMER RESET INPUT (⌐)
1	S1	SIGNAL FORMAT SELECT S1
36	S2	SIGNAL FORMAT SELECT S2
35	S4	SIGNAL FORMAT SELECT S4
52	SCKI	SYSTEM CLOCK INPUT
21	SCKO	SYSTEM CLOCK OUTPUT
33	SLCT	SELECT CTL INPUT
62	SLTC	SELECT LTC INPUT
55	XPN	SYSTEM RESET SIGNAL INPUT (NEGATIVE-LOGIC)
31	TCIN	LONGITUDINAL TIME AND CONTROL CODE INPUT
51	TCT	INPUT SELECT FLAG OUTPUT
53	TMO	TIME OVER SIGNAL OUTPUT (NEGATIVE-LOGIC)
7	WR	WRITE SIGNAL OUTPUT (NEGATIVE-LOGIC)
47	VDD	POWER LINE (+5V)
61	VDD	
40	GND	GND LINE
54	GND	
64	TEST	TEST MODE SET INPUT (TO BE CONNECTED WITH GND)
63	TPN	
37	TSG1	
38	TSG2	
39	TSG3	

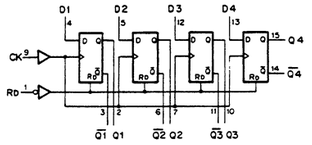
TC40175BP (TOSHIBA)
C-MOS D-TYPE FLIP-FLOP
— TOP VIEW —



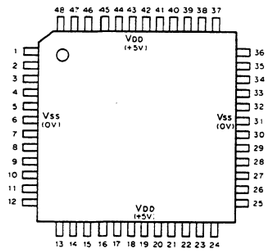


CK	D	RD	Q	Q̄
⌐	0	1	0	1
⌐	1	1	1	0
L	X	1	Q0	Q̄0
X	X	0	0	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

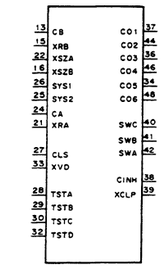


CX7992 (SONY) FLAT PACKAGE
C-MOS CCD CLOCK GENERATOR
— TOP VIEW —

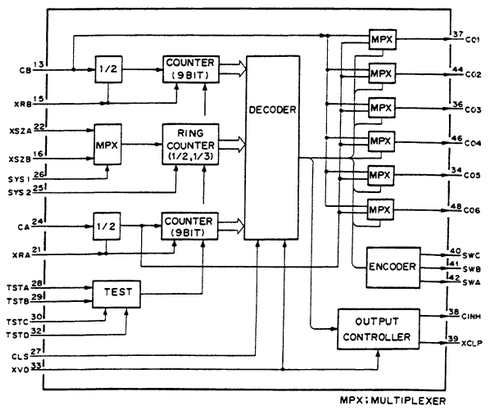


PIN ASSIGNMENT

PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
1			NC	13		O	CB	25	O		SYS2	37		O	CO1
2			NC	14			NC	26	O		SYS1	38		O	CINH
3			NC	15		O	XRB	27	O		CLS	39		O	XCLP
4			NC	16		O	XSZB	28	O		TSTA	40		O	SWC
5			NC	17			NC	29	O		TSTB	41		O	SWB
6			Vss	18			NC	30	O		TSTC	42		O	SWA
7			NC	19			VDD	31			Vss	43			VDD
8			NC	20			NC	32	O		TSTD	44		O	CO2
9			NC	21		O	XRA	33	O		XVD	45			NC
10			NC	22		O	XSZA	34		O	CO5	46		O	CO4
11			NC	23			NC	35			NC	47			NC
12			NC	24		O	CA	36		O	CO3	48		O	CO6

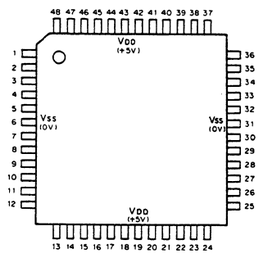


CA ; CLOCK A IN
CB ; CLOCK B IN
CINH ; CHROMA MIX INHIBIT OUT
CLS ; CLOCK FREQ SELECT IN
CO1-CO6; CCD DRIVE CLOCK OUT
SWA ; CCD READ DATA SELECT OUT
SWB ; CCD READ DATA SELECT OUT
SWC ; CCD READ DATA SELECT OUT
SYS 1; SYSTEM SELECT 1 IN
SYS 2; SYSTEM SELECT 2 IN
TSTA ; for the TEST
TSTB ; for the TEST
TSTC ; for the TEST
TSTD ; for the TEST
XCLP ; CHROMA CLAMP OUT
XRA ; RESET 2 IN
XRB ; RESET 3 IN
XSZA ; RECORD PROCESS SELECT IN
XSZB ; PLAYBACK PROCESS SELECT IN
XVD ; RESET 1 IN



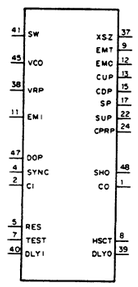
MPX : MULTIPLEXER

CX7994 (SONY) FLAT PACKAGE
C-MOS VCO DRIVER
— TOP VIEW —

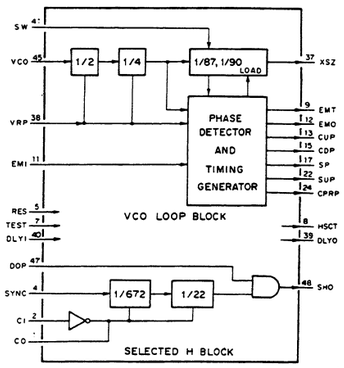


PIN ASSIGNMENT

PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
*1		O	CO	13		O	CUP	25			NC	37		O	XSZ
2	O		CI	14			NC	26			NC	38	O		VRP
3			NC	15		O	CDP	27			NC	39		O	DLYO
4	O		SYNC	16			NC	28			NC	40	O		DLYI
5	O		RES	17		O	SP	29			NC	41	O		SW
6			Vss	18			NC	30			NC	42			NC
7	O		TEST	19			VDD	31			Vss	43			VDD
8		O	HSCT	20			NC	32			NC	44			NC
9		O	EMT	21			NC	33			NC	45	O		VCO
10			NC	22		O	CPRP	34			NC	46			NC
11	O		EMI	23			NC	35			NC	47	O		DOP
12		O	EMO	24		O	SUP	36			NC	48		O	SHO



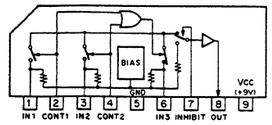
CDP ; CHARGE DOWN PULSE OUT
CI ; CLOCK IN
CO ; CLOCK OUT
CPRP; CHARGE PUMP RESET PULSE OUT
CUP ; CHARGE UP PULSE OUT
DLYI ; for the TEST
DLYO; for the TEST
DOP ; DOC PULSE IN
EMI ; EXT MONO-MULTI IN
EMO ; EXT MONO-MULTI OUT
EMT ; EXT MONO-MULTI TRIGGER OUT
HSCT; for the TEST
RES ; for the TEST
SHO ; SELECTED H OUT
SP ; SAMPLING PULSE OUT
SUP ; SPEED UP PULSE OUT
SW ; 696/720 SELECT SW
SYNC; COMPOSITE SYNC IN
TEST; for the TEST
VCO ; 696fH/720fH VCO PULSE IN
VRP ; VCO RESET PULSE IN
XSZ ; START ZERO OUT



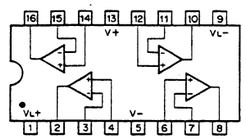
VCO LOOP BLOCK

SELECTED H BLOCK

CX894 (SONY)
3 INPUT SWITCH
— SIDE VIEW —



HA1-4905 (HARRIS)
VOLTAGE COMPARATOR
— TOP VIEW —

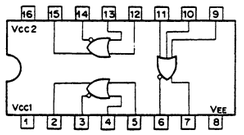


NOTE: V+ AND V- DETERMINE THE ALLOWABLE INPUT SIGNAL RANGE.

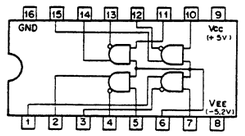
VL+ AND VL- DETERMINE THE OUTPUT SWING.

HA3-2525-5 (HARRIS)
HA7-2525 (HARRIS)
OPERATIONAL AMPLIFIER
— TOP VIEW —

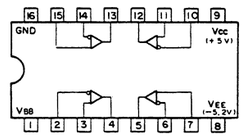
HD10105 (HITACHI)
MC10105L (MOTOROLA)
ECL 2-3-2-INPUT OR/NOR GATE
— TOP VIEW —



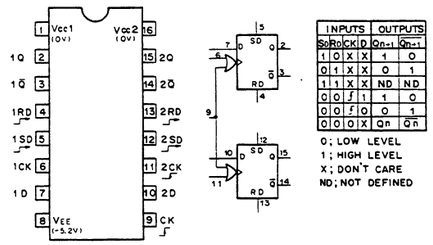
HD10124 (HITACHI)
MC10124L (MOTOROLA)
ECL TTL-TO-ECL TRANSLATOR
— TOP VIEW —



HD10125 (HITACHI)
MC10125L (MOTOROLA)
ECL ECL-TO-TTL TRANSLATOR
— TOP VIEW —



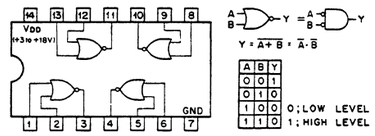
HD10131 (HITACHI)
MC10131L (MOTOROLA)
ECL D-TYPE FLIP FLOP
— TOP VIEW —



INPUTS				OUTPUTS	
SD	RD	CK	D	Qn+1	Qn+1
1	0	X	X	1	0
0	1	X	X	0	1
1	1	X	X	ND	ND
0	0	↑	1	1	0
0	0	↑	0	0	1
0	0	0	X	Qn	Qn

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
ND ; NOT DEFINED

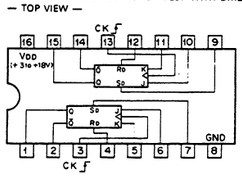
HD14001BP (HITACHI)
MB84001B (FUJITSU)
TC4001BP (TOSHIBA)
uPD4001BC (NEC)
C-MOS 2-INPUT NOR GATE
— TOP VIEW —



A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

HD14027BP (HITACHI)
TC4027BP (TOSHIBA)
uPD4027C (NEC)
C-MOS J-K MASTER SLAVE FLIP-FLOP WITH DIRECT SET/RESET
— TOP VIEW —



DIRECT R-S FLIP FLOP

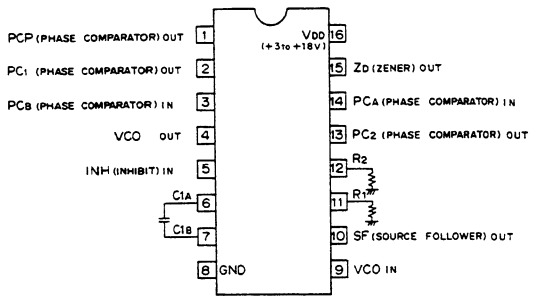
Sd	Rd	Q
0	0	Qn
0	1	0
1	0	1
1	1	0

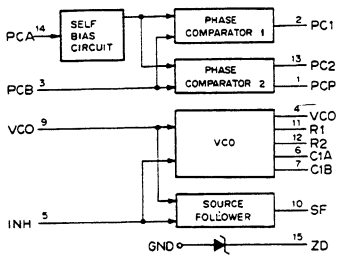
J-K FLIP FLOP

tn	tn+1
J K	Q
0 0	Qn
0 1	0
1 0	1
1 1	Qn

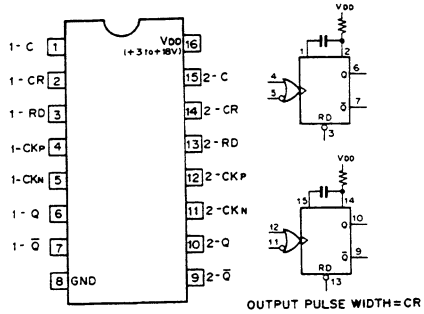
0 ; LOW LEVEL
1 ; HIGH LEVEL
CK; ↑ tn ; BEFORE CLOCK
tn+1 ; AFTER CLOCK

HD14046BP (HITACHI)
MC14046BCP (MOTOROLA)
C-MOS PHASE LOCKED LOOP
— TOP VIEW —



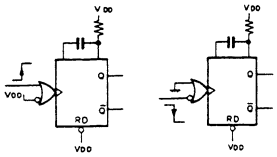


HD14538BP (HITACHI)
MC14538BCP (MOTOROLA)
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
— TOP VIEW —

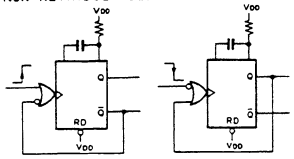


OUTPUT PULSE WIDTH=CR

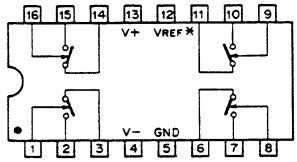
RETRIGGERABLE M.M.V



NON-RETRIGGERABLE M.M.V



HI1-201 (HARRIS)
HI1-201HS (HARRIS)
C-MOS ANALOG SWITCH
— TOP VIEW —



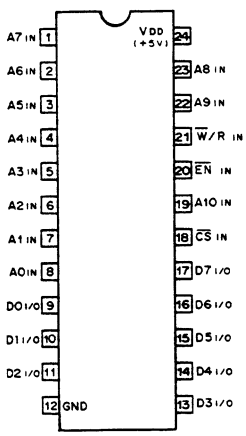
CONT IN	SW
0	
1	

0 ; LOW LEVEL
1 ; HIGH LEVEL

* NOTE

INTERFACE	VREF CONNECTION
TTL	OPEN
C-MOS	VDD ≦ 5.5V ; OPEN
	VDD > 5.5V ; TO VDD

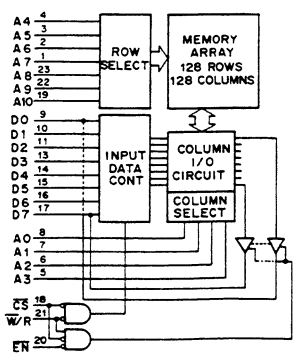
HM6116LP-2 (HITACHI) (ACCESS TIME = 120 nS)
MSM5128-12RS (OKI) (ACCESS TIME = 120 nS)
C-MOS 16384(2048x8)-BIT HIGH SPEED STATIC RAM
— TOP VIEW —



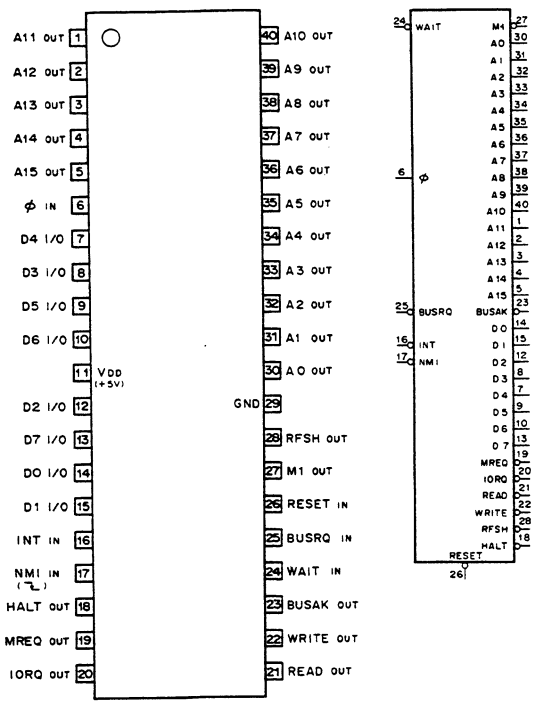
INPUTS			FUNCTION
CS	W/R	EN	
0	0	X	WRITE
0	1	0	READ
0	1	1	DISABLE (OUTPUT=HI-Z)
1	X	X	DISABLE (OUTPUT=HI-Z)

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

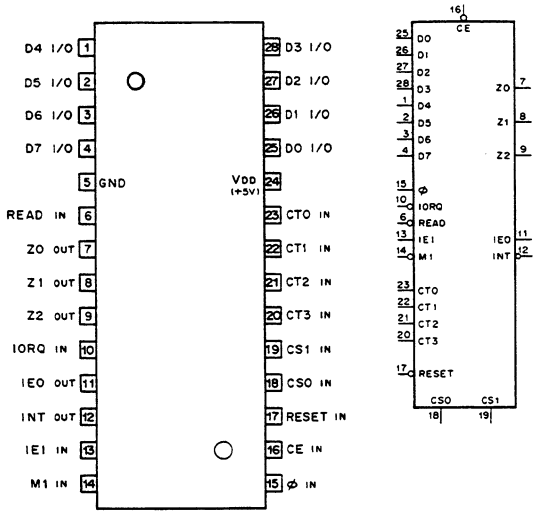
A0 - A10 ; ADDRESS INPUTS
W/R ; WRITE / READ ENABLE
EN ; OUTPUT ENABLE
CS ; CHIP SELECT
D0 - D7 ; DATA INPUTS / OUTPUTS



LH0080A (SHARP)
N-MOS 8-BIT MICROPROCESSOR
— TOP VIEW —



LH0082A (SHARP)
N-MOS COUNTER TIMER CIRCUIT
— TOP VIEW —

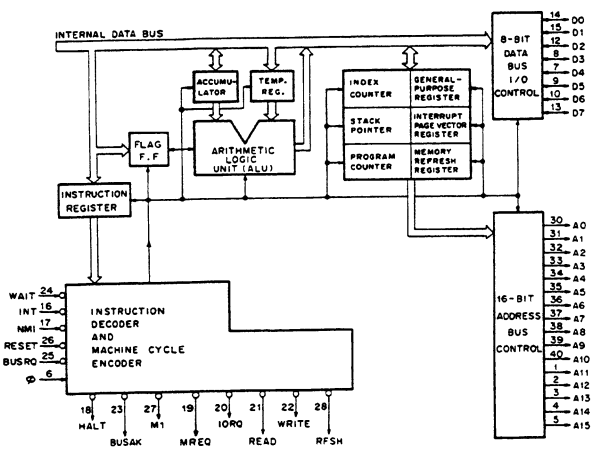


φ ; SYSTEM CLOCK
CE ; CHIP ENABLE
CSO, CS1 ; CHANNEL SELECT
CTO-CT3 ; EXTERNAL CLOCK/TIMER TRIGGER
D0-D7 ; 3-STATE DATA INPUT/OUTPUT
IEI ; INTERRUPT ENABLE INPUT
IEO ; INTERRUPT ENABLE OUTPUT
INT ; INTERRUPT REQUEST (OPEN DRAIN)
IORQ ; I/O REQUEST
M1 ; MACHINE CYCLE 1
READ ; READ CYCLE STATUS
Z0-Z2 ; ZERO COUNT/TIME OUT

CHANNEL SELECT FUNCTION

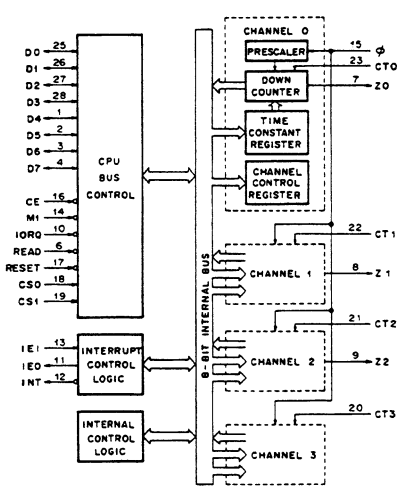
CS1	CSO	SELECTED CHANNEL
0	0	0
0	1	1
1	0	2
1	1	3

0;LOW LEVEL
1;HIGH LEVEL

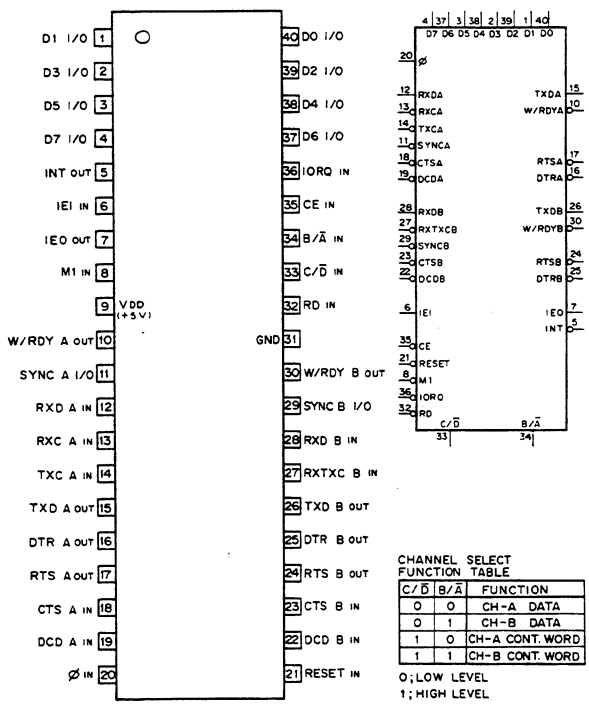


TEMP. REG. ; TEMPORARY REGISTER

φ ; CLOCK
A0-A15 ; 3-STATE ADDRESS OUTPUT
BUSAK ; BUS ACKNOWLEDGE
BUSRQ ; BUS REQUEST
D0-D7 ; 3-STATE DATA INPUT/OUTPUT
HALT ; HALT STATE
INT ; INTERRUPT REQUEST
IORQ ; 3-STATE I/O REQUEST
M1 ; MACHINE CYCLE 1
MREQ ; 3-STATE MEMORY REQUEST
NMI ; NON-MASKABLE INTERRUPT (DOWN EDGE TRIGGER)
READ ; 3-STATE MEMORY READ
RFSH ; REFRESH
WRITE ; 3-STATE MEMORY WRITE



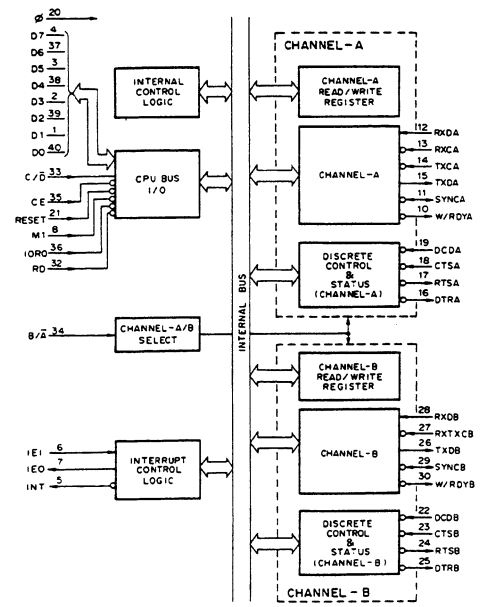
LH0084A (SHARP)
N-MOS 2-CHANNEL SERIAL INPUT/OUTPUT
FOR MICROCOMPUTER SYSTEM
— TOP VIEW —



CHANNEL SELECT FUNCTION TABLE

C/D̄	B/Ā	FUNCTION
0	0	CH-A DATA
0	1	CH-B DATA
1	0	CH-A CONT. WORD
1	1	CH-B CONT. WORD

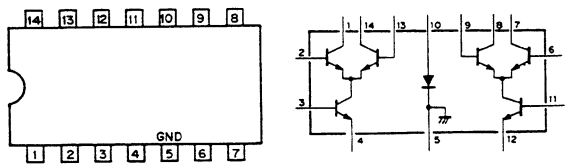
0 ; LOW LEVEL
1 ; HIGH LEVEL



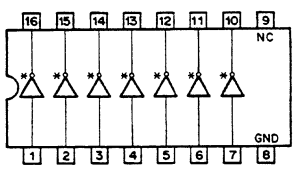
Ø ; SYSTEM CLOCK IN
D7-D0 ; DATA I/O
C/D̄ ; CONTROL/DATA SELECT IN
CE ; CHIP ENABLE IN
M1 ; MACHINE CYCLE 1 IN
IORQ ; I/O REQUEST IN
RD ; READ IN
B/Ā ; CHANNEL B/A SELECT IN
IEI ; INTERRUPT ENABLE IN
IEO ; INTERRUPT ENABLE OUT
INT ; INTERRUPT OUT

RXD ; RECEIVE DATA IN
RXC ; RECEIVE CLOCK IN
TXC ; TRANSMIT CLOCK IN
TXD ; TRANSMIT DATA OUT
SYNC ; EXTERNAL CHARACTER SYNCHRONIZATION I/O
W/RDY ; WAIT/READY OUT
DCD ; DATA CARRIER DETECT IN
CTS ; CLEAR TO SEND IN
RTS ; REQUEST TO SEND OUT
DTR ; DATA TERMINAL READY OUT

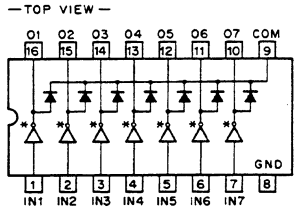
M5109P (MITSUBISHI)
DIFFERENTIAL AMPLIFIER
— TOP VIEW —



M54517P (MITSUBISHI)
INVERTER WITH OPEN-COLLECTOR
(DARLINGTON-CONNECTED TRANSISTOR ARRAY)
— TOP VIEW —

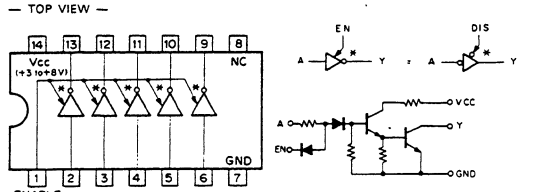


M54523P (MITSUBISHI)
BIPOLAR TRANSISTOR ARRAY WITH OPEN COLLECTOR
—TOP VIEW—



COM : COMMON

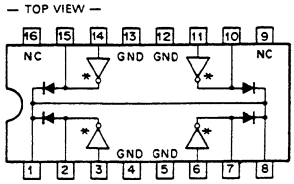
M54529AP (MITSUBISHI)
TRANSISTOR ARRAY
— TOP VIEW —

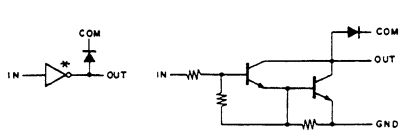


A	EN	Y
0	1	1
1	1	0
X	0	1

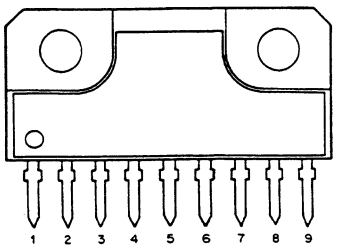
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
✱ ; OPEN COLLECTOR

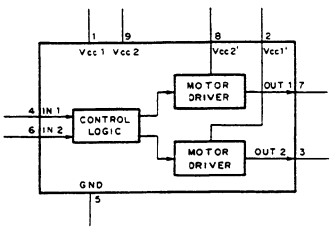
M54532P (MITSUBISHI)
DARLINGTON TRANSISTOR ARRAY WITH CLAMP DIODE
— TOP VIEW —





M54543L (MITSUBISHI)
BI-DIRECTIONAL MOTOR DRIVER
— SIDE VIEW —

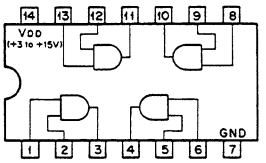


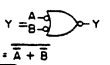


IN		OUT		MODE
1	2	1	2	
0	0	Z	Z	NO OPERATION
1	0	1	0	ROTATION
0	1	0	1	REVERSE ROTATION
1	1	0	0	BRAKE

0 : LOW LEVEL
1 : HIGH LEVEL
Z : HIGH IMPEDANCE

MB84081B (FUJITSU)
TC4081BP (TOSHIBA)
uPD4081BC (NEC)
C-MOS 2-INPUT AND GATE
— TOP VIEW —

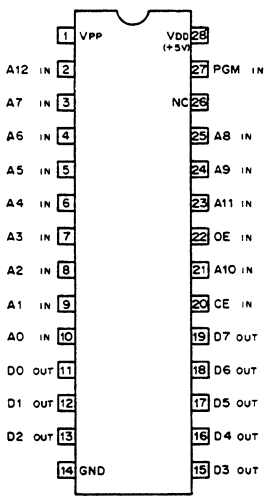


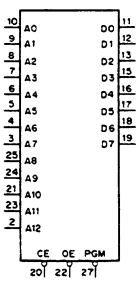


A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

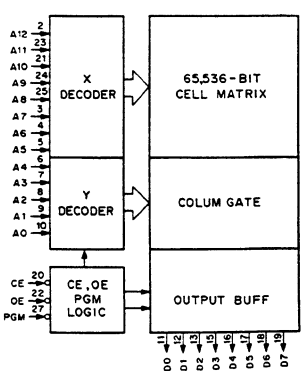
0: LOW LEVEL
1: HIGH LEVEL

MBM2764-20Z (FUJITSU) (ACCESS TIME = 200 nS)
MSM2764AS (OKI) (ACCESS TIME = 250 nS)
N-MOS 64K (8K-8) ERASABLE PROM WITH 3-STATE OUTPUTS
— TOP VIEW —





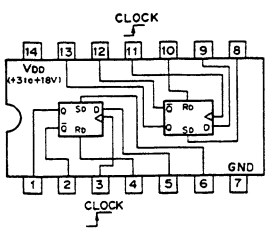
A0–A12 : ADDRESS
CE : CHIP ENABLE
D0–D7 : DATA OUTPUT
OE : OUTPUT ENABLE
PGM : PROGRAM ENABLE
VPP : PROGRAM VOLTAGE



An	CE	OE	PGM	VPP	Dn	FUNCTION
An	0	0	1	+5V	DENTERED	READ
An	0	1	1	+5V	HI-Z	OUTPUT DISABLE
An	0	0	0	+5V	HI-Z	OUTPUT DISABLE
X	1	X	X	+5V	HI-Z	STANDBY
An	0	X	⊔	+21V	DIN	PGM
An	0	0	1	+21V	DENTERED	PGM VERIFY
X	1	X	X	+21V	HI-Z	PGM INH

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH INPEDANCE

MB840138 (FUJITSU)
C-MOS D-TYPE FLIP-FLOP WITH DIRECT SET/RESET
— TOP VIEW —



DIRECT R-S FLIP FLOP

Sd	Rd	On	$\overline{On}$
0	0	On	$\overline{On}$
0	1	0	1
1	0	1	0
1	1	1	1

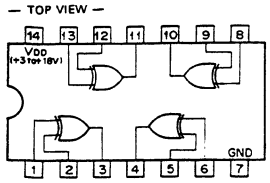
0: LOW LEVEL
1: HIGH LEVEL

D-TYPE FLIP FLOP

CKn	CKn+1
D	Q
0	0
1	1

CLOCK CK: ⌐¬
CKn; BEFORE CLOCK
CKn+1; AFTER CLOCK

MB840708 (FUJITSU)
MC14070BCP (MOTOROLA)
C-MOS EXCLUSIVE OR GATE
— TOP VIEW —

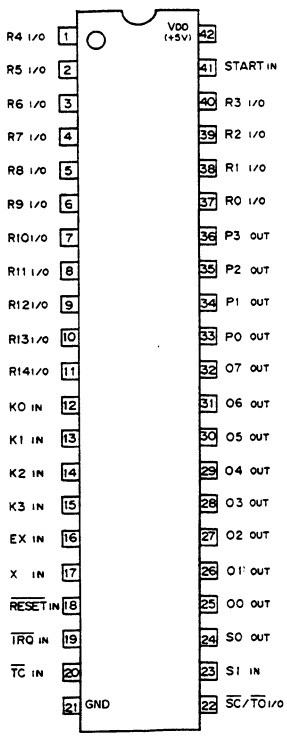


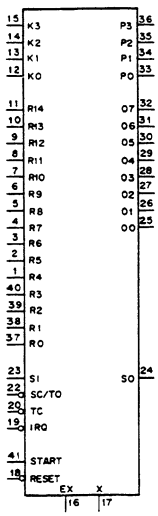


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

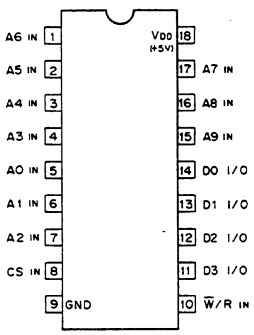
MB88501-PSH (FUJITSU)
C-MOS 4-BIT ONE-CHIP MICROCOMPUTER
— TOP VIEW —

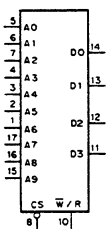




EX	;	EXTERNAL CLOCK IN
$\overline{IRQ}$	;	INTERRUPT REQUEST IN
KO-K3	;	4-BIT PARALLEL IN
O0-O7	;	PARALLEL OUT/8-BIT PLA OUT
PO-P3	;	4-BIT PARALLEL OUT
RO-R14	;	DATA IN/OUT
$\overline{RESET}$	;	RESET IN
$\overline{SC}/\overline{TO}$	;	SHIFT CLOCK IN/INT TIMING OUT
SI	;	SERIAL DATA IN
SO	;	SERIAL DATA OUT
START	;	STANDBY OFF IN
X	;	CLOCK OUT

MBM2149L-55 (FUJITSU) N-MOS
4096-BIT (1024x4) STATIC RAM WITH 3-STATE OUTPUT
— TOP VIEW —



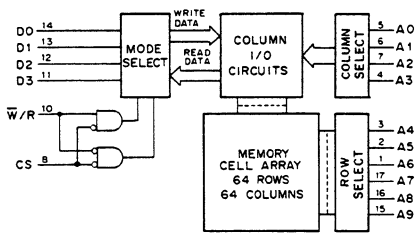


FUNCTION TABLE

CS	W/R	MODE	I/O
0	0	WRITE	INPUT
0	1	READ	OUTPUT
1	X	INHIBIT	HIGH Z

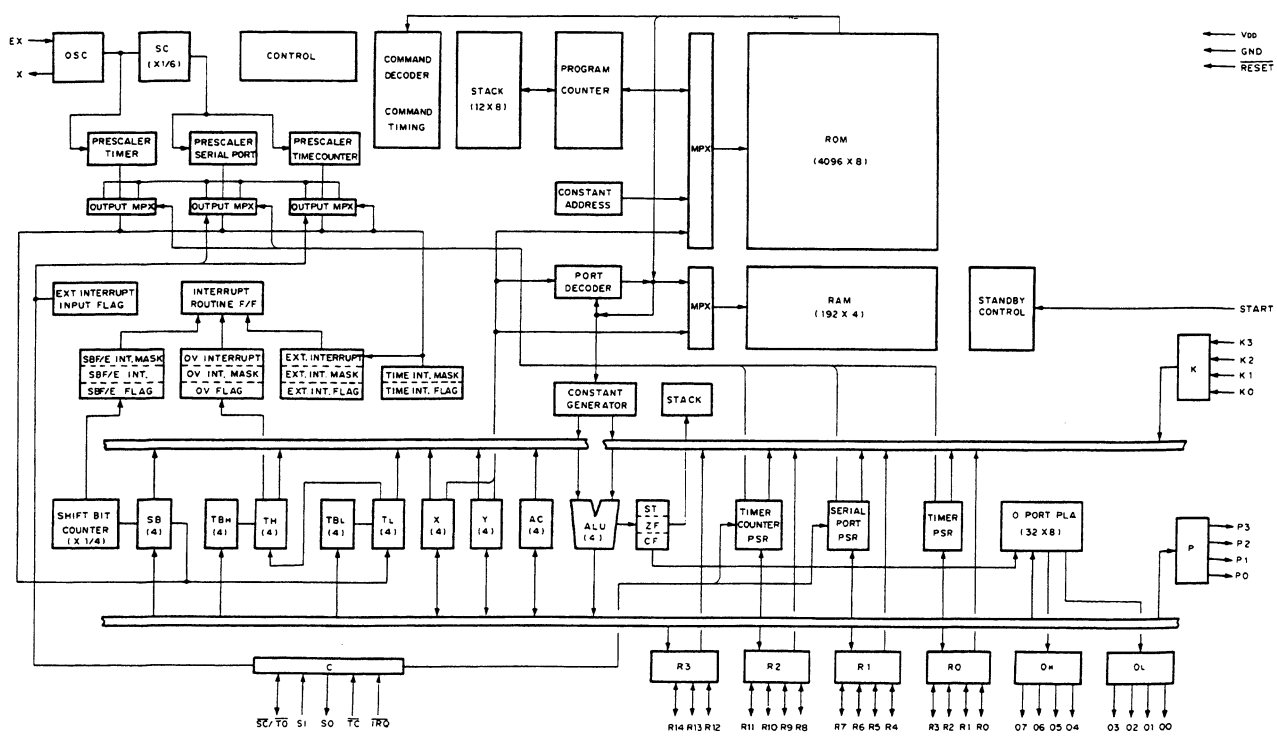
AO — A9	;	ADDRESS INPUTS
CS	;	CHIP SELECT INPUT
DO — D3	;	DATA INPUT/OUTPUT (3-STATE)
W/R	;	WRITE/READ ENABLE INPUT

0	;	LOW LEVEL
1	;	HIGH LEVEL
X	;	DON'T CARE
HIGH Z	;	HIGH IMPEDANCE

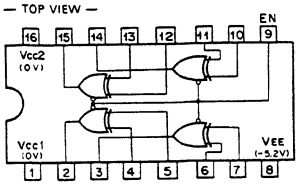


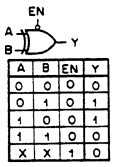
TYPE	-45	-55	-70	L-55	L-70	HP-45
ADDRESS ACCESS TIME (MAX)	45nS	55nS	70nS	55nS	70nS	45nS
CHIP SELECT ACCESS TIME (MAX)	20nS	25nS	30nS	25nS	30nS	45nS
Icc (MAX)	180mA	180mA	180mA	125mA	125mA	80mA

MB88501-PSH



MC10113L (MOTOROLA)
ECL EXCLUSIVE OR GATE
— TOP VIEW —

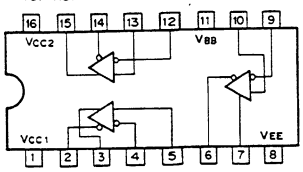




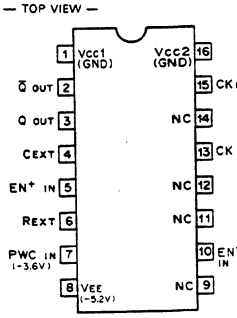
A	B	EN	Y
0	0	0	0
0	1	0	1
1	0	0	1
1	1	0	0
X	X	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

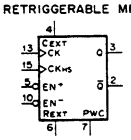
MC10116L (MOTOROLA)
ECL DIFFERENTIAL OR/NOR LINE RECEIVER
— TOP VIEW —



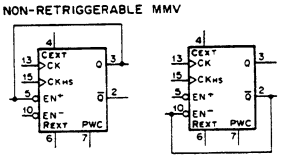
MC10198L (MOTOROLA)
RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
— TOP VIEW —



RETRIGGERABLE MMV



NON-RETRIGGERABLE MMV



CK : CLOCK TRIGGER INPUT
CKHS: HIGH-SPEED CLOCK TRIGGER INPUT
EN+ : TRIGGER POSITIVE ENABLE
EN− : TRIGGER NEGATIVE ENABLE
PWC : EXTERNAL PULSE WIDTH CONTROL

FUNCTION TABLE

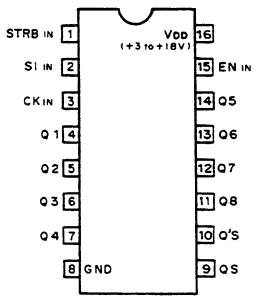
EN+	EN−	TRIG.SLOPE
0	0	⊓↓
0	1	⊓↓
1	0	⊓↓
1	1	DISABLE

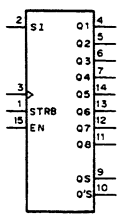
0; LOW LEVEL
1; HIGH LEVEL

OUTPUT PULSE WIDTH : PWQ
PWQ = 1.19 · CEXT (REXT +284)
WHERE
PWQ = SEC
CEXT = FARADS
REXT = OHMS
VEE = -5.2V
PWC = -3.6V

NOTE ; · SELECT REXT RANGING FROM ZERO TO 16K OHMS.
SELECT CEXT GREATER THAN 20PF.

MC14094BCP (MOTOROLA)
MSM4094RS (OKI)
TC4094BP (TOSHIBA)
C-MOS 8-STAGE SHIFT-AND-STORE BUS REGISTER
— TOP VIEW —



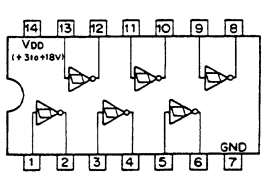


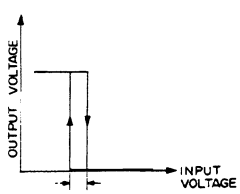
SI ; SERIAL DATA INPUT
CK ; CLOCK INPUT
STRB ; STROBE INPUT
EN ; OUTPUT ENABLE INPUT
Q1~Q8 ; PARALLEL DATA OUTPUTS
QS, Q'S ; SERIAL DATA OUTPUTS

INPUTS				PARALLEL OUT		SERIAL OUT	
CK	EN	STRB	SI	Q1	Qn	QS	Q'S
⊓↓	0	X	X	HI-Z	HI-Z	Q7	NC
⊓↓	0	X	X	HI-Z	HI-Z	NC	Q7
⊓↓	1	0	X	NC	NC	Q7	NC
⊓↓	1	1	0	0	Qn-1	Q7	NC
⊓↓	1	1	1	1	Qn-1	Q7	NC
⊓↓	1	1	1	NC	NC	NC	Q7

1 ; HIGH
0 ; LOW
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE
NC ; NO CHANGE

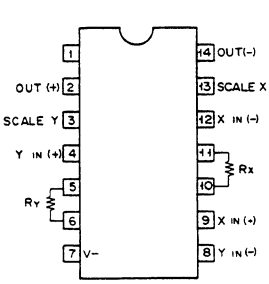
MC14584BCP (MOTOROLA)
uPD4584BC (NEC)
C-MOS SCHMITT TRIGGER INVERTER
— TOP VIEW —

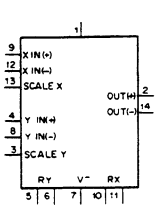




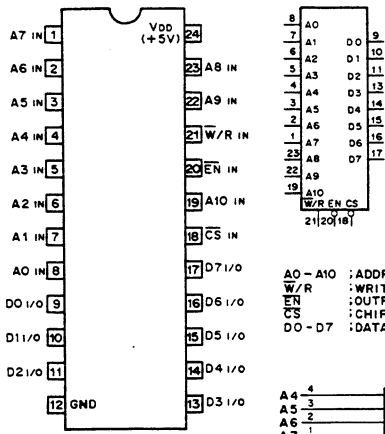
0.4V (VDD=5V)
0.45V(VDD=10V)
0.90V(VDD=15V)

MC1595L (MOTOROLA)
LINEAR MULTIPLIER
— TOP VIEW —





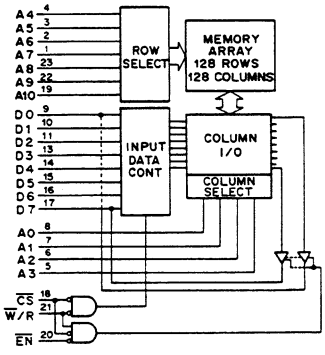
MSM2128-15RS (OKI) (ACCESS TIME = 150 nS)
N-MOS 16384(2048x8)-BIT STATIC RAM
— TOP VIEW —



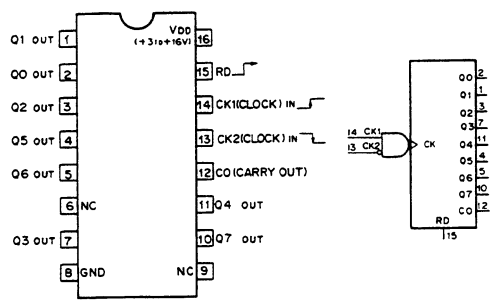
A0 – A10 ; ADDRESS INPUTS
W/R ; WRITE / READ ENABLE
EN ; OUTPUT ENABLE
CS ; CHIP SELECT
DO – D7 ; DATA INPUTS / OUTPUTS

INPUTS			FUNCTION	POWER
CS	W/R	EN		
0	0	X	WRITE	ACTIVE
0	1	0	READ	
0	1	1	DISABLE	
1	X	X	OUTPUT=HI-Z	STANDBY

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE



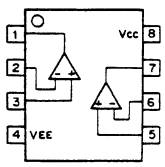
MSM4022RS (OKI)
TC4022BP (TOSHIBA)
C-MOS OCTAL COUNTER/DIVIDER
— TOP VIEW —



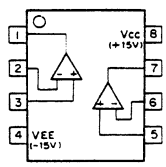
COUNT	INPUTS		OUTPUTS								
	RD	CK=CK1·CK2	Q7	Q6	Q5	Q4	Q3	Q2	Q1	Q0	CO
0	1	X	0	0	0	0	0	0	0	1	1
0	0	⎍	0	0	0	0	0	0	0	1	1
1	0	⎍	0	0	0	0	0	0	1	0	1
2	0	⎍	0	0	0	0	0	1	0	0	1
3	0	⎍	0	0	0	0	1	0	0	0	1
4	0	⎍	0	0	0	1	0	0	0	0	0
5	0	⎍	0	0	1	0	0	0	0	0	0
6	0	⎍	0	1	0	0	0	0	0	0	0
7	0	⎍	1	0	0	0	0	0	0	0	0
NO COUNT	0	1	NO CHANGE								
	0	0									

1: HIGH
0: LOW
X: DON'T CARE

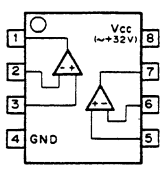
NJM2043D-D (JRC)
OPERATIONAL AMPLIFIER
— TOP VIEW —



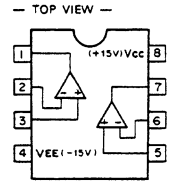
NJM2903D (JRC)
OPERATIONAL AMPLIFIER
— TOP VIEW —



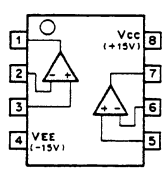
NJM4556D (JRC)
OPERATIONAL AMPLIFIER
— TOP VIEW —



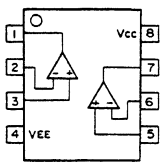
NJM4558D (JRC)
NJM4558DFA (JRC)
uPC4558C (NEC)
OPERATIONAL AMPLIFIER
— TOP VIEW —



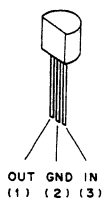
NJM4560D (JRC)
NJM4560DD (JRC)
OPERATIONAL AMPLIFIER
— TOP VIEW —

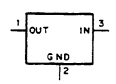


NJM4562D (JRC)
OPERATIONAL AMPLIFIER
— TOP VIEW —



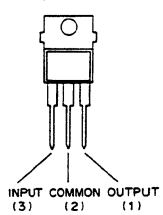
NJM78L ? ?A (JRC)
VOLTAGE REGULATOR

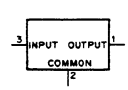




2V	NJM78L02A
5V	NJM78L05A
6V	NJM78L06A
8V	NJM78L08A
9V	NJM78L09A
12V	NJM78L12A
15V	NJM78L15A

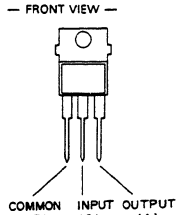
NJM78M ? ?A (JRC)
VOLTAGE REGULATOR
— FRONT VIEW —

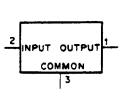




5V	NJM78M05A
6V	NJM78M06A
8V	NJM78M08A
9V	NJM78M09A
12V	NJM78M12A
15V	NJM78M15A
18V	NJM78M18A
20V	NJM78M20A
24V	NJM78M24A

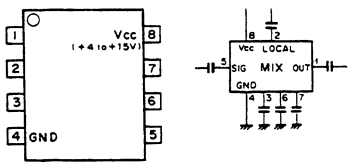
NJM79M ? ?A (JRC)
NEGATIVE VOLTAGE REGULATOR (500mA)
— FRONT VIEW —



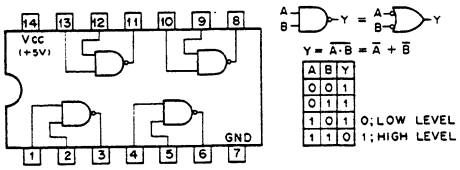


-5V	NJM79M05A
-6V	NJM79M06A
-8V	NJM79M08A
-9V	NJM79M09A
-12V	NJM79M12A
-15V	NJM79M15A
-18V	NJM79M18A
-24V	NJM79M24A

SN16913P (TI)
BALANCED MIXER
— TOP VIEW —



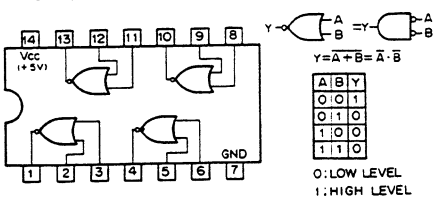
SN7400N (TI)
SN74ALS00N (TI)
SN74LS00N (TI)
SN74S00N (TI)
TTL 2-INPUT POSITIVE-NAND GATE
— TOP VIEW —



A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

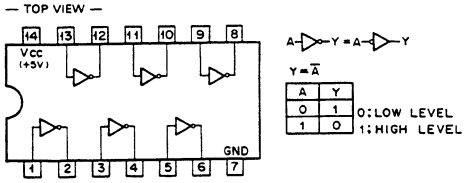
SN74LS02N (TI)
TTL 2-INPUT POSITIVE-NOR GATE
— TOP VIEW —



A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0: LOW LEVEL
1: HIGH LEVEL

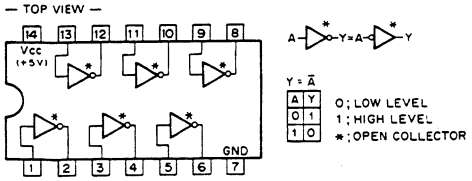
SN7404N (TI)
SN74LS04N (TI)
SN74S04N (TI)
TTL INVERTER
— TOP VIEW —



A	Y
0	1
1	0

0: LOW LEVEL
1; HIGH LEVEL

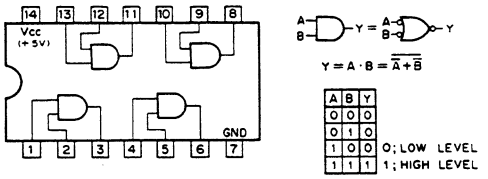
SN7406N (TI)
TTL INVERTER BUFFER/DRIVER WITH OPEN-COLLECTOR
— TOP VIEW —



A	Y
0	1
1	0

0; LOW LEVEL
1; HIGH LEVEL
*; OPEN COLLECTOR

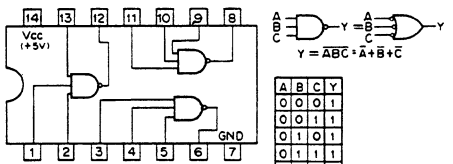
SN7408N (TI)
SN74ALS08N (TI)
SN74LS08N (TI)
TTL 2-INPUT POSITIVE-AND GATE
— TOP VIEW —



A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0; LOW LEVEL
1; HIGH LEVEL

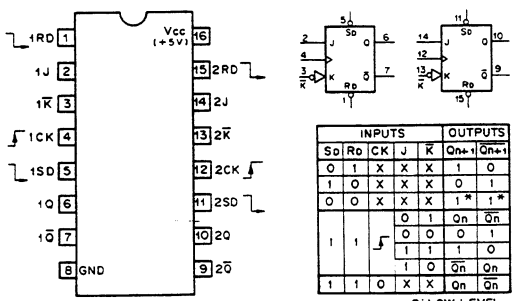
SN74LS10N (TI)
TTL 3-INPUT POSITIVE NAND GATE
— TOP VIEW —



A	B	C	Y
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

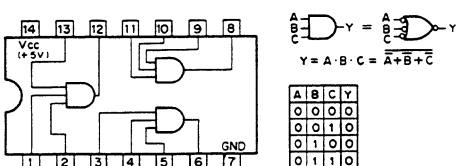
SN74LS109AN (TI)
TTL J-K FLIP-FLOP WITH DIRECT SET/RESET
— TOP VIEW —



INPUTS					OUTPUTS	
$\overline{S_D}$	$\overline{R_D}$	CK	J	$\overline{K}$	Q_{n+1}	$\overline{Q_{n+1}}$
0	1	X	X	X	1	0
1	0	X	X	X	0	1
0	0	X	X	X	1*	1*
1	1	↓	0	1	Q_n	$\overline{Q_n}$
			0	0	0	1
			1	1	1	0
			1	0	$\overline{Q_n}$	Q_n
1	1	0	X	X	Q_n	$\overline{Q_n}$

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
*; NONSTABLE

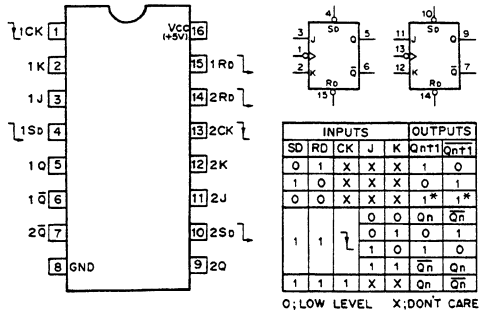
SN74LS11N (TI)
TTL 3-INPUT POSITIVE-AND GATE
— TOP VIEW —



A	B	C	Y
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	1

0; LOW LEVEL
1; HIGH LEVEL

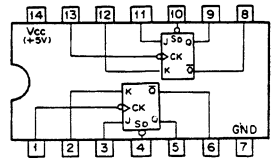
SN74LS112AN (TI)
TTL J-K FLIP-FLOP WITH DIRECT SET/RESET
— TOP VIEW —



INPUTS					OUTPUTS	
SD	RD	CK	J	K	Qn+1	Q̄n+1
0	1	X	X	X	1	0
1	0	X	X	X	0	1
0	0	X	X	X	1*	1*
1	1	↓	0	0	Qn	Q̄n
			0	1	0	1
			1	0	1	0
			1	1	Q̄n	Qn
1	1	1	X	X	Qn	Q̄n

0 ; LOW LEVEL X ; DON'T CARE
1 ; HIGH LEVEL * ; NONSTABLE

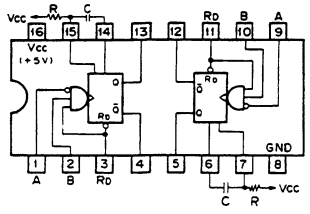
SN74LS113AN (TI)
TTL J-K FLIP FLOP WITH DIRECT SET
— TOP VIEW —



INPUTS				OUTPUTS	
SD	CK	J	K	Qn+1	Q̄n+1
0	X	X	X	1	0
1	↓	0	0	Qn	Q̄n
1	↓	0	1	0	1
1	↓	1	0	1	0
1	↓	1	1	Q̄n	Qn
1	1	X	X	Qn	Q̄n

0 ; LOW LEVEL X ; DON'T CARE
1 ; HIGH LEVEL

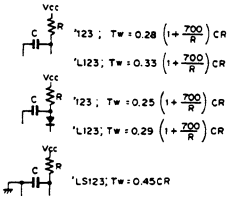
SN74LS123N (TI)
TTL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR WITH DIRECT RESET
— TOP VIEW —



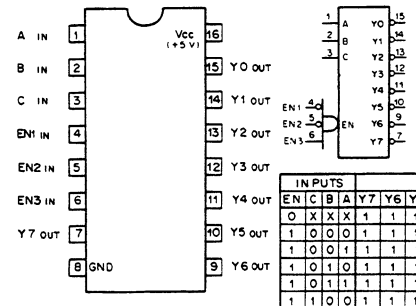
INPUTS			OUTPUTS	
RD	A	B	Q	Q̄
0	X	X	0	1
X	↑	X	0	1
X	X	0	0	1
1	0	↑	⎍	⎍
1	↑	1	⎍	⎍
↑	0	1	⎍	⎍

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

OUTPUT PULSE WIDTH



SN74LS138N (TI)
TTL 3-TO-8-LINE DECODER/DEMULTIPLEXER
— TOP VIEW —

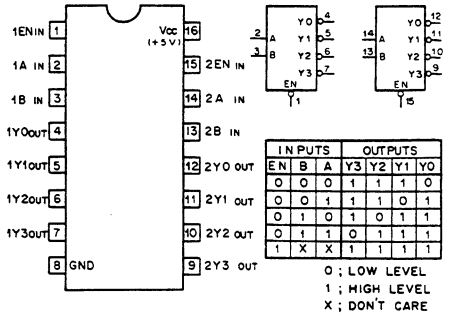


INPUTS				OUTPUTS							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	X	X	X	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

EN = $\overline{EN1} \cdot \overline{EN2} \cdot EN3$

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

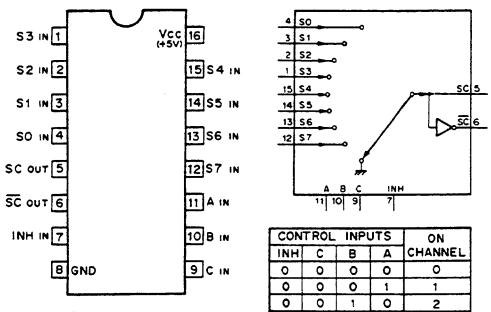
SN74LS139N (TI)
TTL 2-TO-4-LINE DECODER/DEMULTIPLXER
— TOP VIEW —



INPUTS			OUTPUTS			
EN	B	A	Y3	Y2	Y1	Y0
0	0	0	1	1	1	0
0	0	1	1	1	0	1
0	1	0	1	0	1	1
0	1	1	0	1	1	1
1	X	X	1	1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

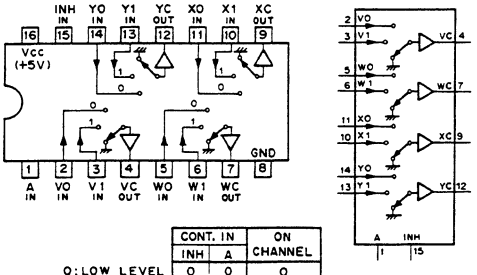
SN74LS151N (TI)
TTL 8-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
— TOP VIEW —



CONTROL INPUTS				ON
INH	C	B	A	CHANNEL
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	X	X	X	GND

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

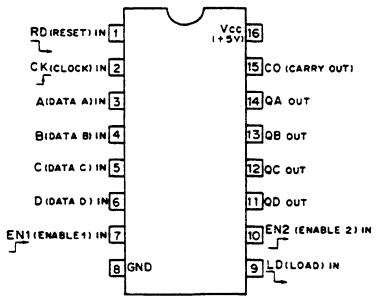
SN74LS157N (TI)
TTL 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
— TOP VIEW —

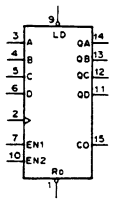


CONT. IN		ON
INH	A	CHANNEL
0	0	0
0	1	1
1	X	GND

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

SN74LS161AN (TI)
TTL PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
— TOP VIEW —





MODE SELECTION

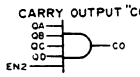
CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (ASYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

COUNT SEQUENCE

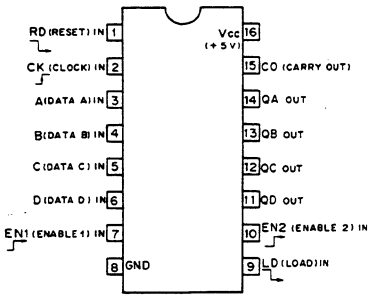
COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

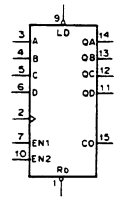
CARRY OUTPUT "CO"



CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15"

SN74LS163AN (TI)
SN74S163N (TI)
TTL PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
— TOP VIEW —





MODE SELECTION

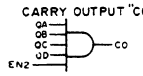
CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

COUNT SEQUENCE

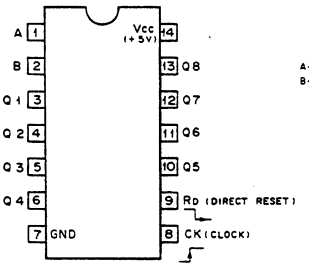
COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

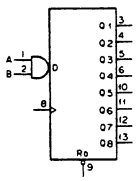
CARRY OUTPUT "CO"



CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

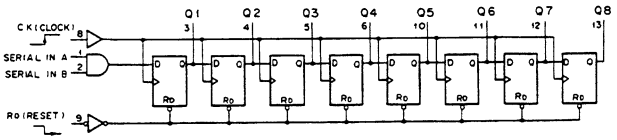
SN74LS164N (TI)
TTL 8-BIT PARALLEL-OUT SERIAL SHIFT REGISTER
— TOP VIEW —



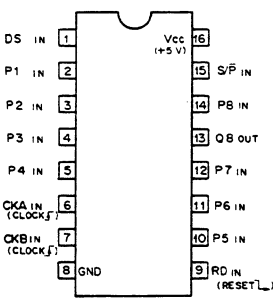


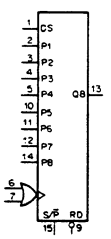
INPUTS				OUTPUTS			
RD	CK	A	B	Q1	Q2	----	Q8
0	X	X	X	0	0	0	0
1	0	X	X	Q1o	Q2o	----	Q8o
1	↑	1	1	1	Q1n	----	Q7n
1	↑	0	X	0	Q1n	----	Q7n
1	↑	X	0	0	Q1n	----	Q7n

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

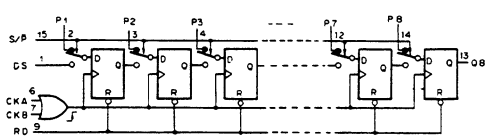


SN74LS166AN (TI)
TTL 8-BIT SHIFT REGISTER
— TOP VIEW —





DS; DATA SERIAL INPUT
P1 – P8; PARALLEL DATA INPUTS
CK; CLOCK

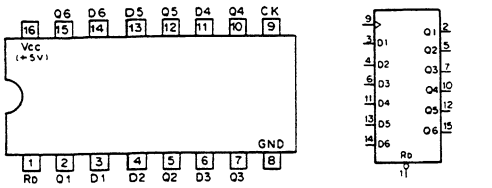


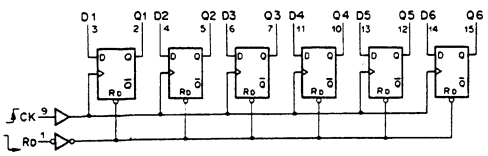
CKA	CKB	CK
0	0	0
X	1	1
1	X	1
1	↓	1
↓	1	1
0	↓	↓
↓	0	↓

INPUTS					OUTPUT
RD	S/P	CK	DS	P1-P8	Q8
0	X	X	X	X	0
1	X	0	X	X	Q8o
1	0	↓	X	1-8	8
1	1	↓	1	X	Q7n
1	1	↓	0	X	Q7n
1	X	↓	X	X	Q8o

0, LOW LEVEL
1, HIGH LEVEL
X; DON'T CARE

SN74LS174N (TI)
TTL D-TYPE FLIP-FLOP WITH DIRECT RESET
— TOP VIEW —



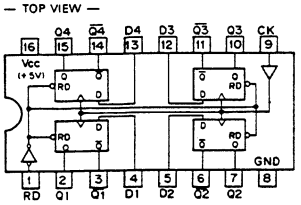


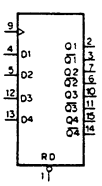
EACH FLIP-FLOP

INPUTS			OUT
RD	CK	D	Q
0	X	X	0
1	↓	0	0
1	↓	1	1
1	0	X	Q0

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

SN74LS175N (TI)
TTL D-TYPE FLIP-FLOP WITH CLEAR
— TOP VIEW —

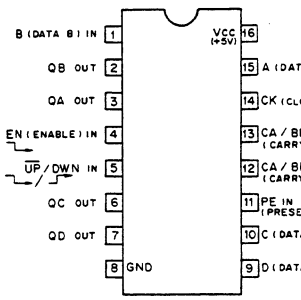


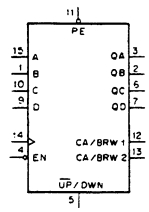


RD	CK	D	Q	$\bar{Q}$
0	X	X	0	1
1	↓	1	1	0
1	↓	0	0	1
1	0	X	Q0	$\bar{Q}_0$

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

SN74191N (TI)
SN74LS191N (TI)
TTL PRESETTABLE SYNCHRONOUS 4-BIT BINARY UP/DOWN COUNTER
— TOP VIEW —





MODE SELECTION

CONTROL INPUTS			MODE
PE	EN	UP/DWN	
0	X	X	PRESET (ASYNCHRONOUS)
1	1	X	NO COUNT
1	0	0	UP COUNT
1	0	1	DOWN COUNT

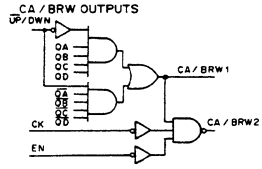
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

UP COUNT
DOWN COUNT

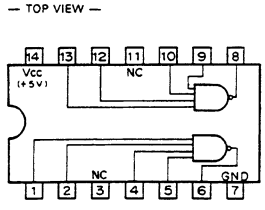
CA/BRW OUTPUTS

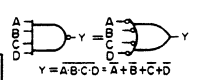


CA/BRW1 OUTPUT IS HIGH WHEN COUNT IS "15" AT UP-COUNT OR WHEN COUNT IS "0" AT DOWN COUNT.

CA/BRW2 OUTPUT IS LOW WHEN BOTH THE CLOCK AND EN INPUTS ARE LOW AND CA/BRW1 OUTPUT IS HIGH.

SN74LS20N (TI)
TTL 4-INPUT POSITIVE NAND GATE
— TOP VIEW —

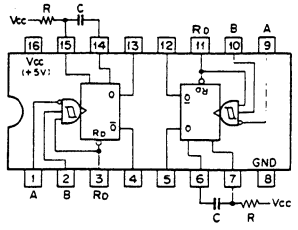




A	B	C	D	Y
0	0	0	0	1
0	0	0	1	1
0	0	1	0	1
0	0	1	1	1
0	1	0	0	1
:	:	:	:	:
1	1	0	1	1
1	1	1	0	1
1	1	1	1	0

0;LOW LEVEL
1;HIGH LEVEL

SN74LS221N (TI)
TTL MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
— TOP VIEW —

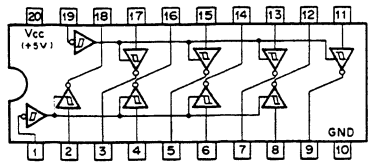


INPUTS			OUTPUTS	
RD	A	B	Q	$\bar{Q}$
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⎍	⎍
1	↓	1	⎍	⎍
↑	0	1	⎍	⎍

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

OUTPUT PULSE WIDTH = 0.7CR

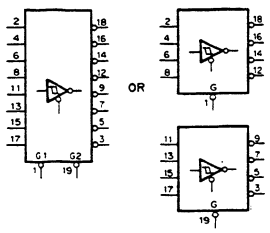
SN74LS240N (TI)
TTL 3-STATE SCHMITT TRIGGER INVERTER/LINE DRIVER
— TOP VIEW —



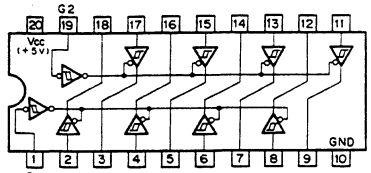


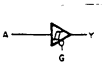
G	A	Y
0	0	1
0	1	0
1	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE



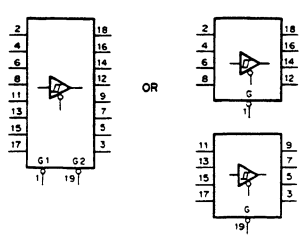
SN74LS244N (TI)
TTL 3-STATE SCHMITT TRIGGER BUFFER/DRIVER
— TOP VIEW —



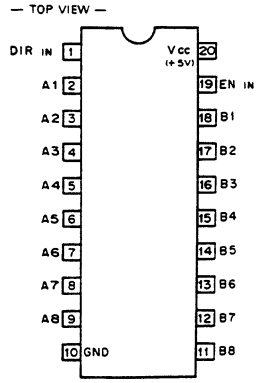


G	A	Y
0	0	0
0	1	1
1	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

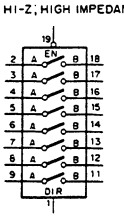


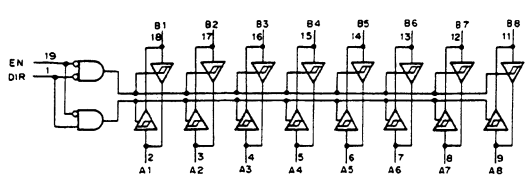
SN74LS245N (TI)
TTL BILATERAL SCHMITT TRIGGER BUS TRANSCEIVERS WITH 3-STATE OUTPUT
— TOP VIEW —



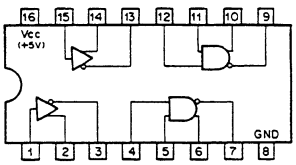
EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	X	HI-Z

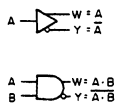
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE.
HI-Z ; HIGH IMPEDANCE



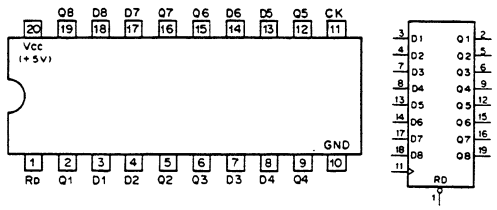


SN74265N (TI)
TTL COMPLEMENTARY-OUTPUT ELEMENT
— TOP VIEW —





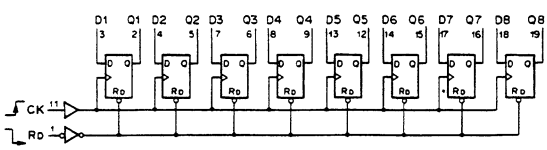
SN74273N (TI)
SN74LS273N (TI)
TTL D-TYPE FLIP-FLOP WITH DIRECT RESET
— TOP VIEW —



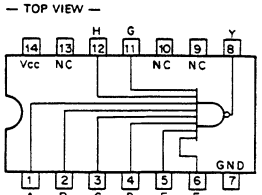
EACH FLIP-FLOP

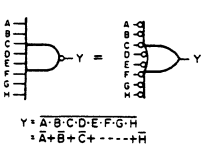
INPUTS			OUT
RD	CK	D	Q
0	X	X	0
1	↓	0	0
1	↓	1	1
1	0	X	Q0

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

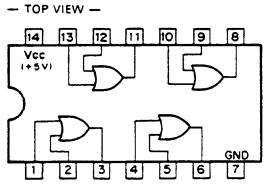


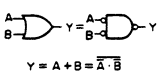
SN74LS30N (TI)
TTL 8-INPUT POSITIVE-NAND GATE
— TOP VIEW —





SN74LS32N (TI)
SN74S32N (TI)
TTL 2-INPUT POSITIVE-OR GATE
— TOP VIEW —

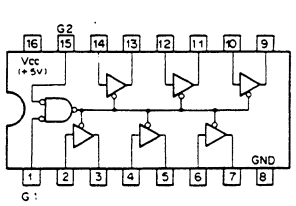


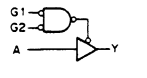


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0 : LOW LEVEL
1 : HIGH LEVEL

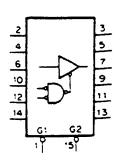
SN74365AN (TI)
TTL 3-STATE BUS DRIVER
— TOP VIEW —





G1	G2	A	Y
0	0	0	0
0	0	1	1
0	1	X	HI-Z
1	0	X	HI-Z
1	1	X	HI-Z

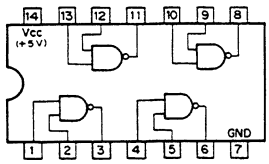
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

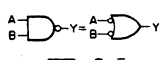


SN74LS37N (TI)

TTL 2-INPUT POSITIVE-NAND GATE BUFFER

— TOP VIEW —





$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

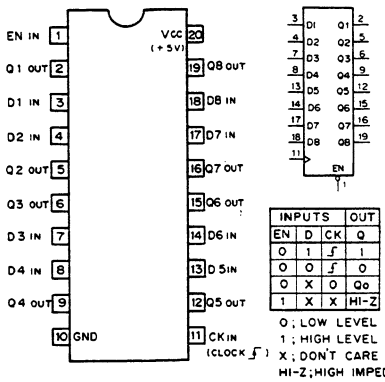
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

SN74LS374N (TI)

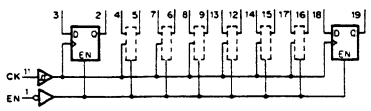
TTL 3-STATE OUTPUTS OCTAL D-TYPE FLIP-FLOP

— TOP VIEW —



INPUTS			OUT
EN	D	CK	Q
0	1	↓	1
0	0	↓	0
0	X	0	Q0
1	X	X	HI-Z

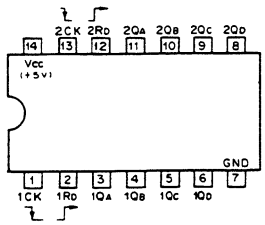
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

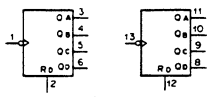


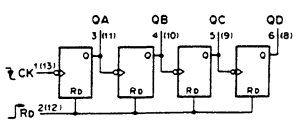
SN74LS393N (TI)

TTL 4-BIT BINARY COUNTER

— TOP VIEW —







COUNT SEQUENCE

COUNT	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

RESET/COUNT FUNCTION

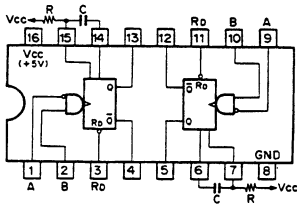
RD	QD	QC	QB	QA
1	0	0	0	0
0	COUNT			

0; LOW LEVEL
1; HIGH LEVEL

SN74LS423N (TI)

TTL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR WITH DIRECT RESET

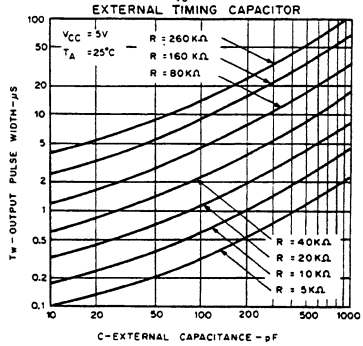
— TOP VIEW —



INPUTS			OUTPUTS	
RD	A	B	Q	Q̄
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⎍	⎍
1	↓	1	⎍	⎍

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

OUTPUT PULSE WIDTH
VS
EXTERNAL TIMING CAPACITOR

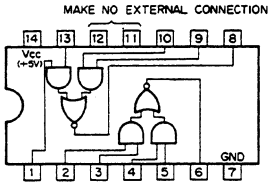


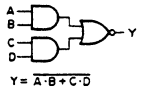
FOR $T_w \geq 100\mu S$ OR $C \geq 1000pF$,
$T_w = 0.38CR$

SN74S51N (TI)

TTL 2-WIDE 2-INPUT AND-OR-INVERT GATE

— TOP VIEW —



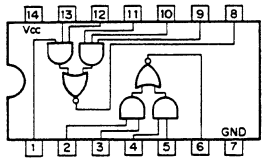


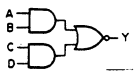
$Y = \overline{A \cdot B + C \cdot D}$

SN74LS51N (TI)

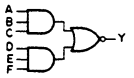
TTL 2-WIDE 2-INPUT / 3-INPUT AND-OR-INVERT GATE

— TOP VIEW —



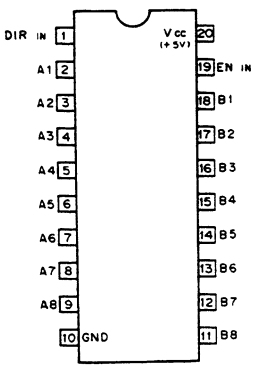


$Y = \overline{A \cdot B + C \cdot D}$



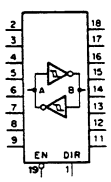
$Y = \overline{A \cdot B \cdot C + D \cdot E \cdot F}$

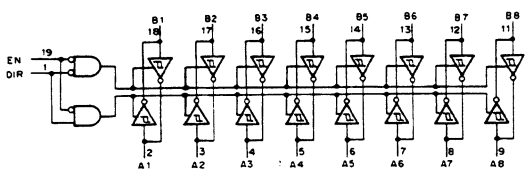
SN74LS640N (TI)
TTL BILATERAL SCHMITT TRIGGER BUS TRANSCEIVERS INVERTER
WITH 3-STATE OUTPUT
— TOP VIEW —



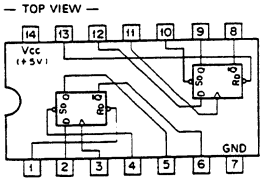
EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	X	HI-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE





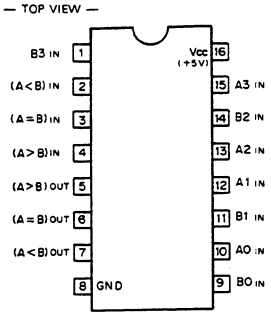
SN74ALS74N (TI)
SN74LS74AN (TI)
SN74S74N (TI)
TTL D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —

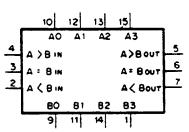


INPUTS				OUTPUTS	
So	Ro	CK	D	Qn+1	Qn+1
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1*	1*
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	X	Qn	Qn

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
1*; NONSTABLE

SN74LS85N (TI)
TTL 4-BIT MAGNITUDE COMPARATOR
— TOP VIEW —

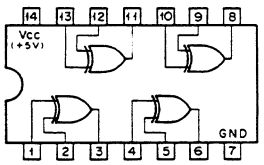


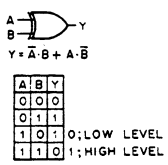


INPUTS								OUTPUTS		
DATA COMPARING					CASCADING					
	A3, B3	A2, B2	A1, B1	A0, B0	A<B	A=B	A>B	A<B	A=B	A>B
A>B	A3>B3	X	X	X	X	X	X	0	0	1
	A3=B3	A2>B2	X	X						
	A3=B3	A2=B2	A1>B1	X						
	A3=B3	A2=B2	A1=B1	A0>B0						
A=B	A3=B3	A2=B2	A1=B1	A0=B0	0	0	0	1	0	1
					0	0	1	0	0	1
					X	1	X	0	1	0
					1	0	0	1	0	0
					1	0	1	0	0	0
A<B	A3=B3	A2=B2	A1=B1	A0<B0	X	X	X	1	0	0
	A3=B3	A2=B2	A1<B1	X						
	A3=B3	A2<B2	X	X						
	A3<B3	X	X	X						

0; LOW LEVEL 1; HIGH LEVEL X; DON'T CARE

SN74LS86N (TI)
TTL EXCLUSIVE OR GATE
— TOP VIEW —

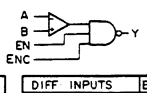


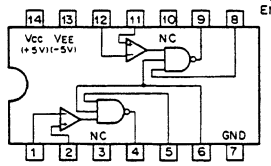


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

SN75107AN (TI)
LINE RECEIVER
— TOP VIEW —

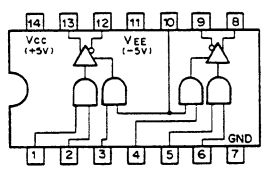


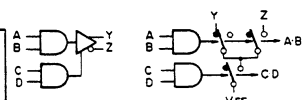


DIFF INPUTS	EN	ENC	Y
B-A ≦ -25mV	X	X	1
|B-A| < 25mV	X	0	1
	0	X	1
	1	1	ND
B-A ≧ 25mV	X	0	1
	0	X	1
	1	1	0

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
ND; NOT DEFINED

SN75110AN (TI)
LINE DRIVER
— TOP VIEW —

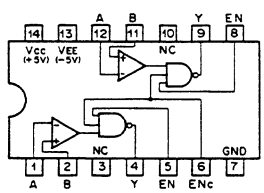




INPUTS				OUTPUTS	
A	B	C	D	Y	Z
X	X	X	0	OFF	OFF
X	X	0	X	OFF	OFF
X	0	1	1	ON	OFF
0	X	1	1	ON	OFF
1	1	1	1	OFF	ON

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

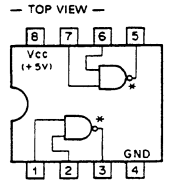
SN75207BN (TI)
BIPOLAR LINE RECEIVER (TTL COMPATIBLE)
— TOP VIEW —

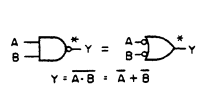


INPUTS			OUT
B-A	EN	ENc	Y
B-A ≧ 10mV	X	0	1
	0	X	1
	1	1	0
|B-A| < 10mV	X	0	1
	0	X	1
	1	1	*
B-A ≦ -10mV	X	X	1

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
*; INDETERMINATE

SN75452BP (TI)
TTL PERIPHERAL POSITIVE-NAND DRIVER
WITH OPEN-COLLECTOR
— TOP VIEW —

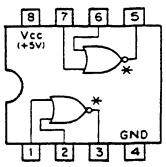


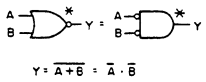


A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

SN75454BP (TI)
TTL PERIPHERAL POSITIVE-NOR DRIVER WITH OPEN COLLECTOR
— TOP VIEW —



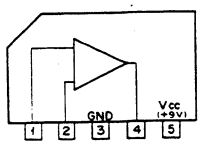


$Y = \overline{A+B} = \overline{A} \cdot \overline{B}$

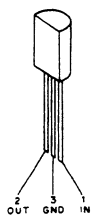
A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

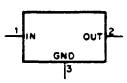
0 ; LOW LEVEL
1 ; HIGH LEVEL

TA7060AP (TOSHIBA)
LINEAR AMP
— SIDE VIEW —



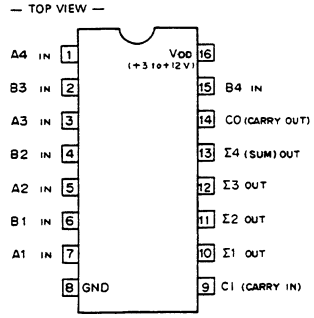
TA78L ? ? ?AP (TOSHIBA)
VOLTAGE REGULATOR

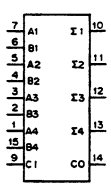




+5V	TA78L005AP
+6V	TA78L006AP
+7V	TA78L007AP
+7.5V	TA78L075AP
+8V	TA78L008AP
+9V	TA78L009AP
+10V	TA78L010AP
+12V	TA78L012AP
+13.2V	TA78L132AP
+15V	TA78L015AP
+18V	TA78L018AP
+20V	TA78L020AP
+24V	TA78L024AP

TC4008BP (TOSHIBA)
C-MOS 4-BIT FULL ADDER
— TOP VIEW —

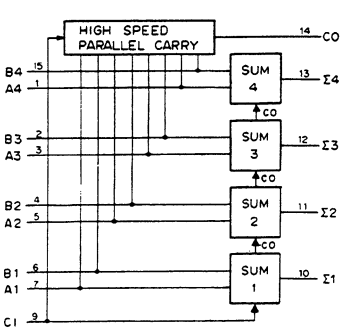




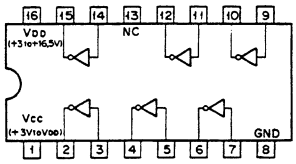
ONE STAGE

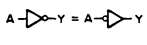
INPUTS			OUTPUTS	
CI	B	A	CO	Σ
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0
1	0	0	0	1
1	0	1	1	0
1	1	0	1	0
1	1	1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL



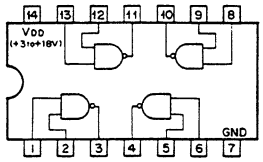
TC4009UBP (TOSHIBA)
C-MOS INVERTING TYPE BUFFER/CONVERTER (TO TTL LEVEL)
— TOP VIEW —

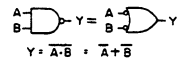




A	Y
0	1
1	0

TC4011BP (TOSHIBA)
μPD4011BC (NEC)
C-MOS 2-INPUT NAND GATE
— TOP VIEW —



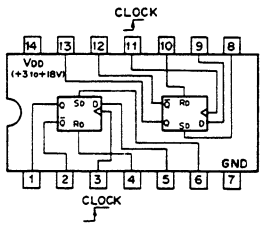


$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC4013BP (TOSHIBA)
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —



DIRECT R-S FLIP FLOP

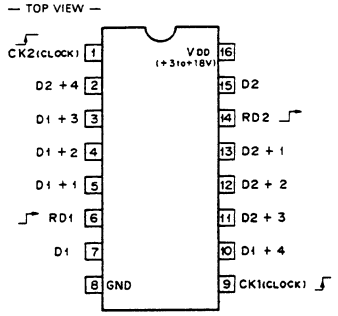
SD	RD	Q	$\overline{Q}$
0	0	On	$\overline{On}$
0	1	0	1
1	0	1	0
1	1	0	1

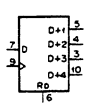
D-TYPE FLIP FLOP

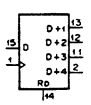
CKn	CKn+1
D	Q
0	0
↑	1

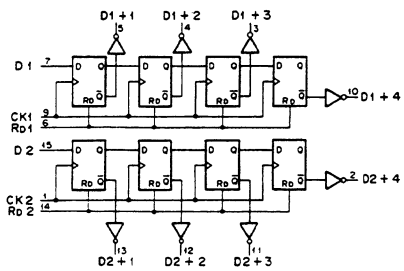
CLOCK CK: ↑
CKn : BEFORE CLOCK
CKn+1 : AFTER CLOCK
0 : LOW LEVEL
1 : HIGH LEVEL

TC4015BP (TOSHIBA)
C-MOS DUAL 4-STAGE STATIC SHIFT REGISTER WITH DIRECT RESET
— TOP VIEW —

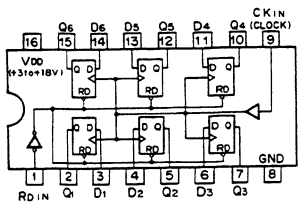


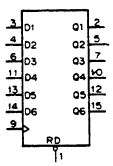






TC40174BP (TOSHIBA)
C-MOS D-TYPE FLIP-FLOP
— TOP VIEW —

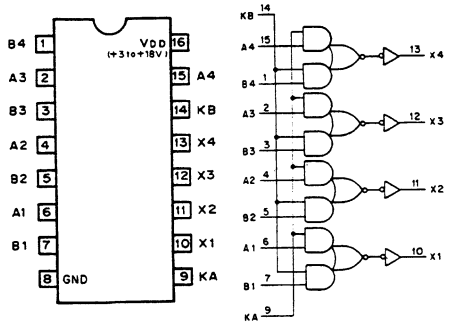




INPUTS			OUTPUT
CK	D	RD	Q
↓	0	1	0
↓	1	1	1
↑	X	1	Q0
X	X	0	0

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

TC4019BP (TOSHIBA)
C-MOS AND-OR SELECT GATE
— TOP VIEW —

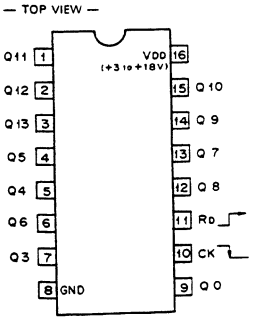


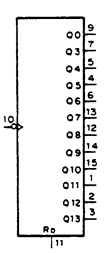
$Xn = An \cdot KA + Bn \cdot KB$

KA	KB	Xn
0	0	0
1	0	An
0	1	Bn
1	1	An+Bn

(n = 1 ~ 4)

TC40208BP (TOSHIBA)
C-MOS 14-STAGE RIPPLE-CARRY BINARY COUNTER/DRIVER
— TOP VIEW —



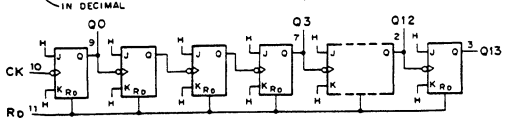


RD	Q13-Q0
1	ALL LOW
0	COUNT

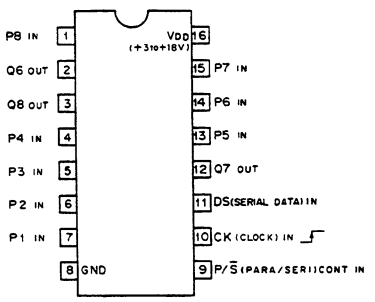
COUNT	BINARY OUTPUTS													
		Q13	Q12	Q11	Q10	Q9	Q8	Q7	Q6	Q5	Q4	Q3	Q2	Q1	Q0
0	0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0001	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	0002	0	0	0	0	0	0	0	0	0	0	0	0	1	0
3	0003	0	0	0	0	0	0	0	0	0	0	0	0	1	1
4	0004	0	0	0	0	0	0	0	0	0	0	0	1	0	0
16380	4FFC	1	1	1	1	1	1	1	1	1	1	1	1	0	0
16381	4FFD	1	1	1	1	1	1	1	1	1	1	1	1	0	1
16382	4FFE	1	1	1	1	1	1	1	1	1	1	1	1	1	0
16383	4FFF	1	1	1	1	1	1	1	1	1	1	1	1	1	1

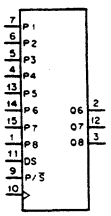
IN HEXADECIMAL
IN DECIMAL

0; LOW LEVEL
1; HIGH LEVEL



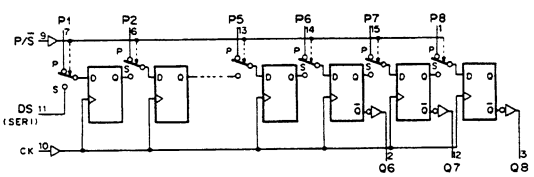
TC4021BP (TOSHIBA)
C-MOS ASYNCHRONOUS PARALLEL/SYNCHRONOUS SERIAL INPUT 8-BIT STATIC SHIFT REGISTER
— TOP VIEW —



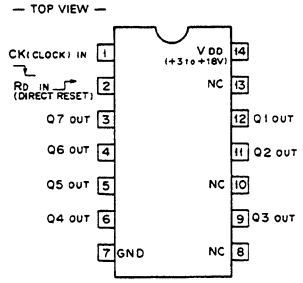


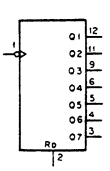
tn				tn + 1							
INPUT				INTERNAL OUTPUTS					OUTPUTS		
P/S CONT	CK	P	DS	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
1	X	P1 ~ P8	X	P1	P2	P3	P4	P5	P6	P7	P8
0	↓	X	1	1	Q1n	Q2n	Q3n	Q4n	Q5n	Q6n	Q7n
0	↓	X	0	0	Q1n	Q2n	Q3n	Q4n	Q5n	Q6n	Q7n
X	0	X	X	Q1n	Q2n	Q3n	Q4n	Q5n	Q6n	Q7n	Q8n

0; LOW LEVEL X; DON'T CARE. tn; BEFORE CLOCK
1; HIGH LEVEL tn+1; AFTER CLOCK



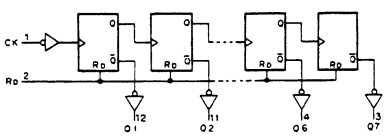
TC4024BP (TOSHIBA)
C-MOS ASYNCHRONOUS 7-BIT BINARY COUNTER
— TOP VIEW —



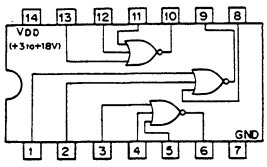


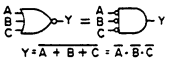
COUNT	INPUTS		OUTPUTS						
	CK	RD	Q7	Q6	Q5	Q4	Q3	Q2	Q1
0	X	1	0	0	0	0	0	0	0
1	↓	0	0	0	0	0	0	0	1
2	↓	0	0	0	0	0	0	1	0
3	↓	0	0	0	0	0	0	1	1
4	↓	0	0	0	0	0	1	0	0
125	↓	0	1	1	1	1	1	0	1
126	↓	0	1	1	1	1	1	1	0
127	↓	0	1	1	1	1	1	1	1
—	0	0	NO CHANGE						
—	1	0							

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE



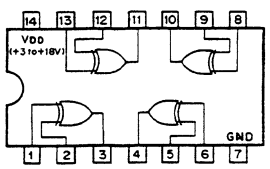
TC4025BP (TOSHIBA)
C-MOS 3-INPUT NOR GATE
— TOP VIEW —





A	B	C	Y
0	0	0	1
X	X	1	0
X	1	X	0
1	X	X	0

TC4030BP (TOSHIBA)
uPD4030BC (NEC)
C-MOS EXCLUSIVE OR GATE
— TOP VIEW —

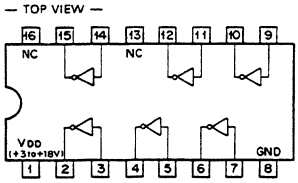


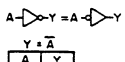


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0: LOW LEVEL
1: HIGH LEVEL

TC4049BP (TOSHIBA)
C-MOS INVERTING TYPE BUFFER/CONVERTER
— TOP VIEW —

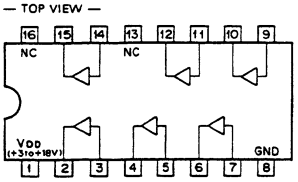


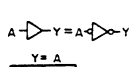


A	Y
0	1
1	0

0; LOW LEVEL
1; HIGH LEVEL

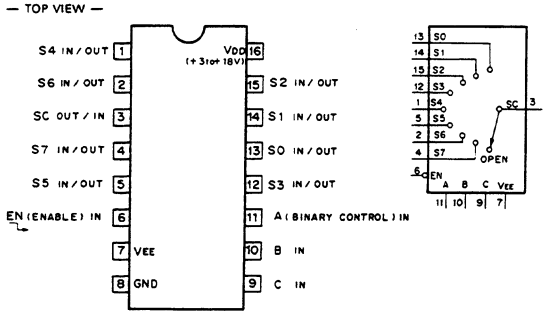
TC4050BP (TOSHIBA)
uPD4050C (NEC)
C-MOS NON-INVERTING TYPE BUFFER/CONVERTER
— TOP VIEW —





A	Y
0	0
1	1

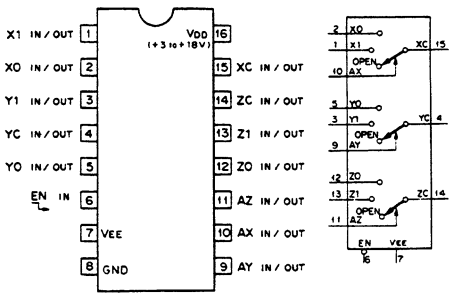
TC4051BP (TOSHIBA)
C-MOS 8-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —



EN	C	B	A	"ON" CHANNEL
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	X	X	X	OPEN

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

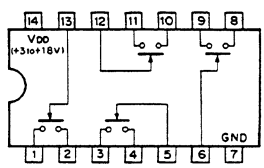
TC4053BP (TOSHIBA)
uPD4053BC (NEC)
C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —



CONT. INPUTS		ON
EN	A (X,Y,Z)	CHANNEL
0	0	0
0	1	1
1	X	OPEN

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

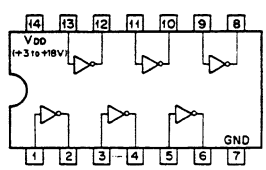
TC4066BP (TOSHIBA)
uPD4066BC (NEC)
C-MOS BILATERAL SWITCH
— TOP VIEW —

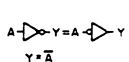


CONT IN	SW
0	OFF
1	ON

0; LOW LEVEL
1; HIGH LEVEL

TC4069UBP (TOSHIBA)
uPD4069UBC (NEC)
C-MOS INVERTER
— TOP VIEW —

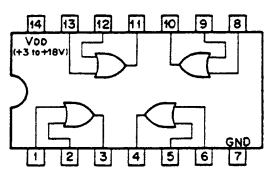


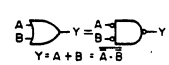


A	Y
0	1
1	0

0: LOW LEVEL
1: HIGH LEVEL

TC4071BP (TOSHIBA)
uPD4071BC (NEC)
C-MOS 2-INPUT OR GATE
— TOP VIEW —

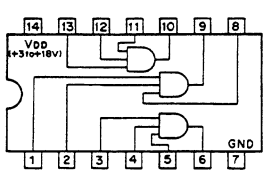


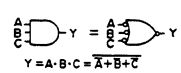


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0: LOW LEVEL
1: HIGH LEVEL

TC4073BP (TOSHIBA)
uPD4073BC (NEC)
C-MOS 3-INPUT POSITIVE AND GATE
— TOP VIEW —

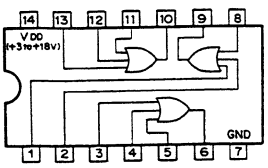


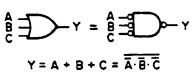


A	B	C	Y
X	X	0	0
X	0	X	0
0	X	X	0
1	1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC4075BP (TOSHIBA)
C-MOS 3-INPUT OR GATE
— TOP VIEW —

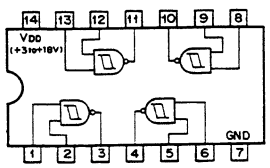


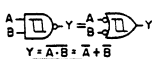


C	B	A	Y
0	0	0	0
X	X	1	1
X	1	X	1
1	X	X	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

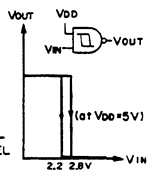
TC4093BP (TOSHIBA)
C-MOS 2-INPUT NAND SCHMITT TRIGGER
— TOP VIEW —



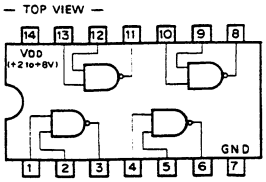


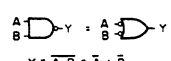
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL



TC40H000P (TOSHIBA)
C-MOS 2-INPUT NAND GATE
— TOP VIEW —

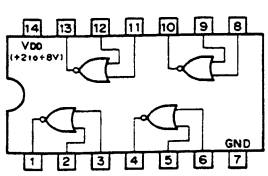


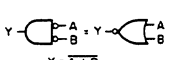


A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC40H002P (TOSHIBA)
C-MOS 2-INPUT NOR GATE
— TOP VIEW —

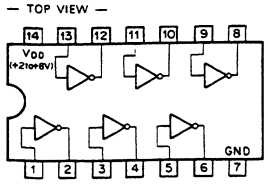




A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL

TC40H004P (TOSHIBA)
C-MOS INVERTER
— TOP VIEW —

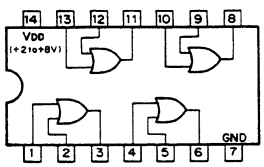


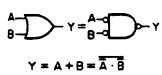


A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC40H032P (TOSHIBA)
C-MOS 2-INPUT POSITIVE-OR GATE
— TOP VIEW —

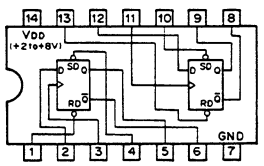


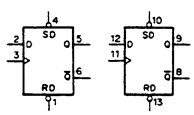


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0 : LOW LEVEL
1 : HIGH LEVEL

TC40H074P (TOSHIBA)
C-MOS HIGH SPEED D-TYPE FLIP-FLOP WITH DIRECT SET/RESET
— TOP VIEW —





D - MODE

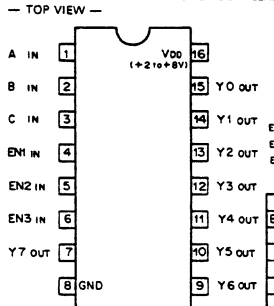
tn	tn + 1	
D	Q	$\overline{Q}$
0	0	1
1	1	0

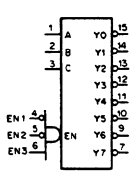
R-S MODE

INPUT		OUTPUT	
RD	SD	Q	$\overline{Q}$
0	0	1	1
0	1	0	1
1	0	1	0
1	1	D-MODE	

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC40H138P (TOSHIBA)
C-MOS 3-TO-8-LINE DECODER/DEMULTIPLEXER
— TOP VIEW —



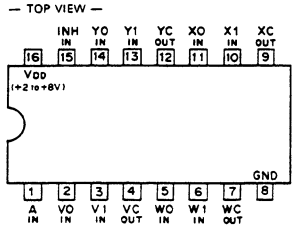


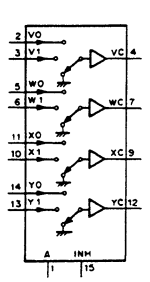
INPUTS				OUTPUTS							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	X	X	X	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

$EN = \overline{EN1} \cdot \overline{EN2} \cdot EN3$

0 : LOW LEVEL
1 : HIGH LEVEL
X ; DON'T CARE

TC40H157P (TOSHIBA)
C-MOS 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
— TOP VIEW —

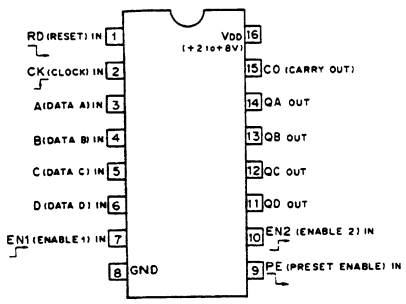


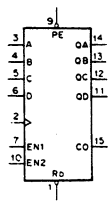


CONT. IN		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	X	GND

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC40H161P (TOSHIBA)
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
— TOP VIEW —





MODE SELECTION

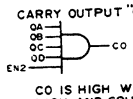
CONTROL INPUTS				MODE
RD	PE	EN1	EN2	
0	X	X	X	RESET (ASYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

COUNT SEQUENCE

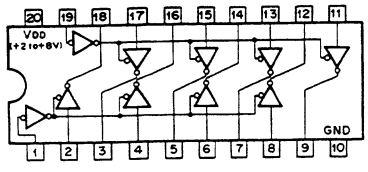
COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

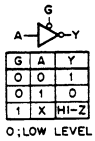
CARRY OUTPUT "CO"



CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

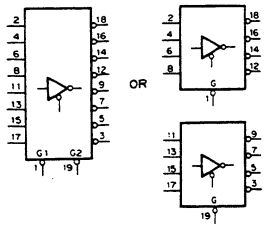
TC40H240P (TOSHIBA)
C-MOS 3-STATE INVERTER/LINE DRIVER
— TOP VIEW —



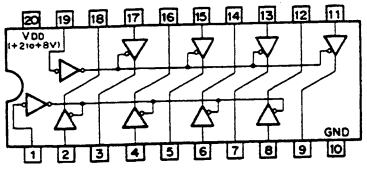


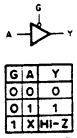
G	A	Y
0	0	1
0	1	0
1	X	HI-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE



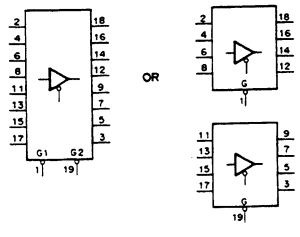
TC40H244P (TOSHIBA)
C-MOS 3-STATE BUFFER/DRIVER
— TOP VIEW —



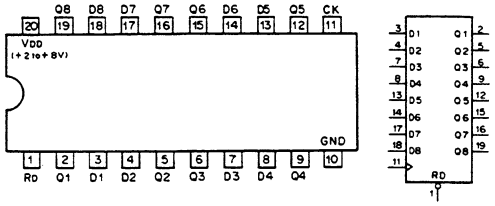


G	A	Y
0	0	0
0	1	1
1	X	HI-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE



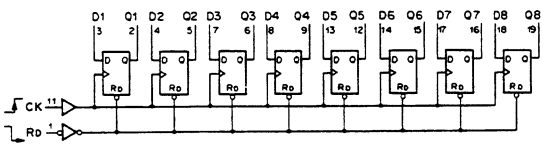
TC40H273P (TOSHIBA)
C-MOS D-TYPE FLIP-FLOP WITH DIRECT RESET
— TOP VIEW —



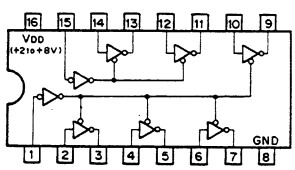
EACH FLIP-FLOP

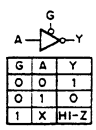
INPUTS			OUT
RD	CK	D	Q
0	X	X	0
1	↑	0	0
1	↑	1	1
1	0	X	Q0

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE



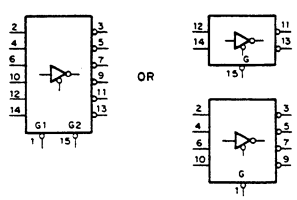
TC40H368P (TOSHIBA)
C-MOS INVERTING 3-STATE BUFFER
— TOP VIEW —



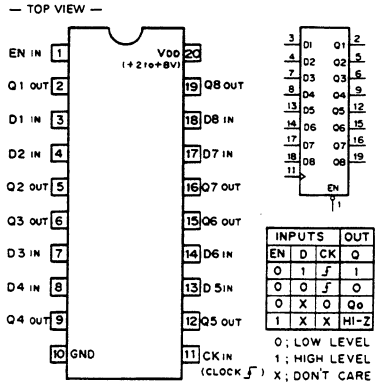


G	A	Y
0	0	1
0	1	0
1	X	HI-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

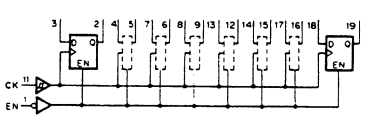


TC40H374P (TOSHIBA)
C-MOS 3-STATE OUTPUTS OCTAL D-TYPE FLIP-FLOP
— TOP VIEW —

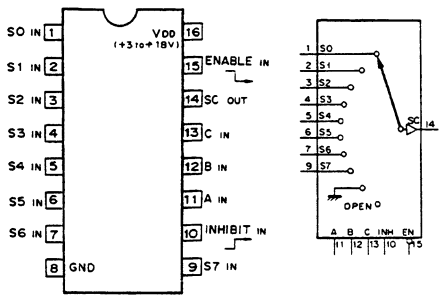


INPUTS			OUT
EN	D	CK	Q
0	1	↑	1
0	0	↑	0
0	X	0	Q0
1	X	X	HI-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE



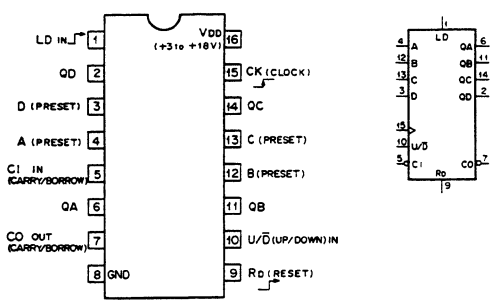
TC4512BP (TOSHIBA)
C-MOS 8-CHANNEL DATA SELECTOR/MULTIPLEXER
— TOP VIEW —



CONTROL INPUTS					OUTPUT
EN	INH	C	B	A	SC
0	0	0	0	0	S0
0	0	0	0	1	S1
0	0	0	1	0	S2
0	0	0	1	1	S3
0	0	1	0	0	S4
0	0	1	0	1	S5
0	0	1	1	0	S6
0	0	1	1	1	S7
0	1	X	X	X	GND
1	X	X	X	X	OPEN

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

TC4516BP (TOSHIBA)
uPD4516BC (NEC)
C-MOS PRESETTABLE BINARY UP/DOWN COUNTER
— TOP VIEW —



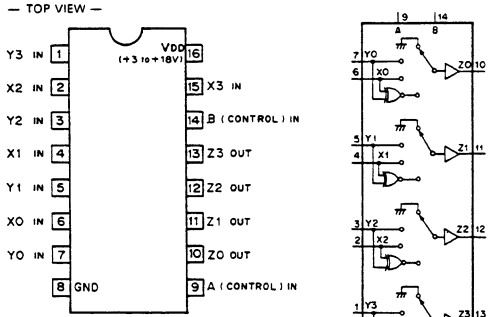
INPUTS					OUTPUTS			
CK	RD	LD	CI	U/D	QD	QC	QB	QA
X	1	X	X	X	0	0	0	0
X	0	1	X	X	SET TO A,B,C,D			
↓	0	0	0	1	COUNT UP			
↓	0	0	0	0	COUNT DOWN			
0	0	0	X	X	NO CHANGE			
X	0	0	1	X	NO CHANGE			

CO = L
CI = L 8 (DOWN-COUNT "0" OR UP-COUNT "15")

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

COUNT UP ——— COUNT DOWN

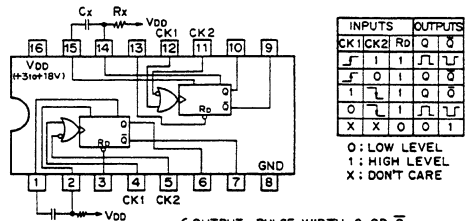
TC4519BP (TOSHIBA)
uPD4519BC (NEC)
C-MOS 4-BIT AND/OR SELECTOR
2-CHANNEL DATA SELECTOR
EXCLUSIVE "NOR" GATE
— TOP VIEW —



CONTROL		OUTPUT
A	B	Z
0	0	GND
0	1	Y
1	0	X
1	1	Y ⊕ X = Z

0; LOW LEVEL
1; HIGH LEVEL

TC4528BP (TOSHIBA)
C-MOS RETRIGGERABLE/RESETTABLE MMV
— TOP VIEW —

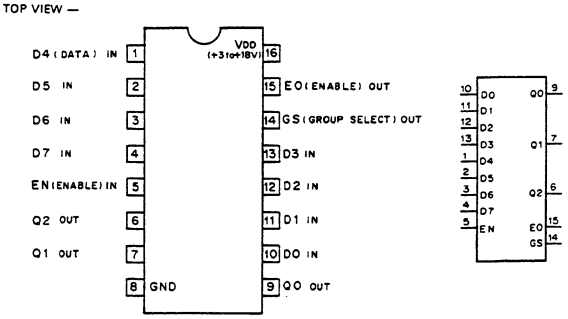


INPUTS			OUTPUTS	
CK1	CK2	RD	Q	$\overline{Q}$
↓	1	1	⊓	⊔
↓	0	1	0	1
1	↑	1	⊓	⊔
0	↑	1	⊓	⊔
X	X	0	0	1

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE

OUTPUT PULSE WIDTH Q OR $\overline{Q}$
• (FOR Cx ≧ 0.01μF USE FORMULA)
PW = 0.2 · Rx · Cx · $\mathcal{L}_n$ (VDD − GND)
• (FOR Cx < 0.01μF USE DATA BOOK)

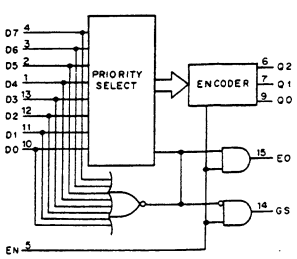
TC4532BP (TOSHIBA)
C-MOS 8-BIT PRIORITY ENCODER
— TOP VIEW —



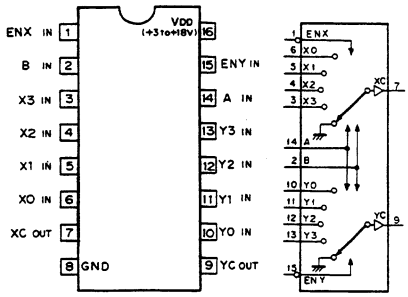
D7 IS THE HIGHEST PRIORITY

INPUTS									OUTPUTS				
EN	D7	D6	D5	D4	D3	D2	D1	D0	GS	Q2	Q1	Q0	EO
0	X	X	X	X	X	X	X	X	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0	1
1	1	X	X	X	X	X	X	X	1	1	1	1	0
1	0	1	X	X	X	X	X	X	1	1	1	0	0
1	0	0	1	X	X	X	X	X	1	1	0	1	0
1	0	0	0	1	X	X	X	X	1	1	0	0	0
1	0	0	0	0	1	X	X	X	1	0	1	1	0
1	0	0	0	0	0	1	X	X	1	0	1	0	0
1	0	0	0	0	0	0	1	X	1	0	0	1	0
1	0	0	0	0	0	0	0	1	1	0	0	0	0

1 : HIGH LEVEL
0 : LOW LEVEL
X : DON'T CARE



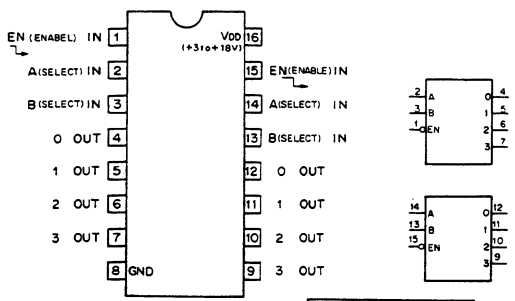
TC4539BP (TOSHIBA)
C-MOS DUAL 4-CHANNEL DATA SELECTOR/MULTIPLEXER
— TOP VIEW —



CONT IN			ON CHANNEL
EN	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	X	X	GND

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

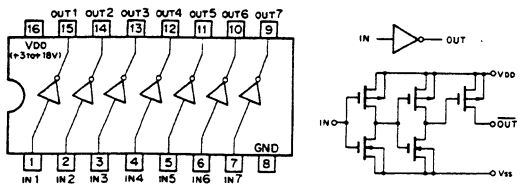
TC4555BP (TOSHIBA)
C-MOS BINARY TO 1-OF-4 DECODER/DEMULTIPLEXER
— TOP VIEW —



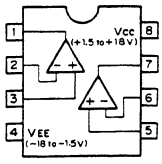
INPUTS			OUTPUTS			
EN	B	A	3	2	1	0
0	0	0	0	0	0	1
0	0	1	0	0	1	0
0	1	0	0	1	0	0
0	1	1	1	0	0	0
1	X	X	0	0	0	0

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

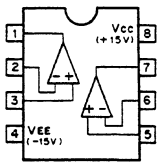
TC5067BP (TOSHIBA)
C-MOS HIGH VOLTAGE BUFFER/INVERTING TYPE
— TOP VIEW —



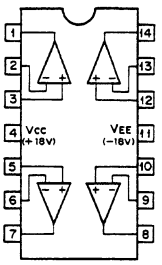
TL062CP (TI)
OPERATIONAL AMPLIFIER
(JFET INPUT)
— TOP VIEW —



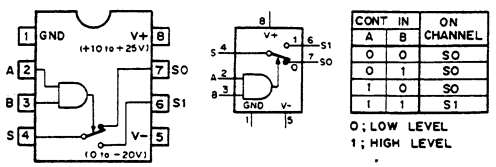
TL082CP (TI)
uPC4082C (NEC)
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —



TL084CN (TI)
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —



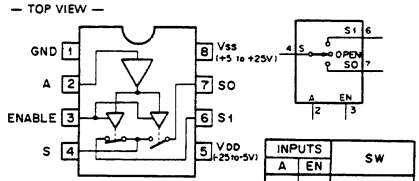
TL601CP (TI)
P-MOS ANALOG SWITCH
— TOP VIEW —



CONT IN		ON CHANNEL
A	B	
0	0	SO
0	1	SO
1	0	SO
1	1	S1

0 ; LOW LEVEL
1 ; HIGH LEVEL

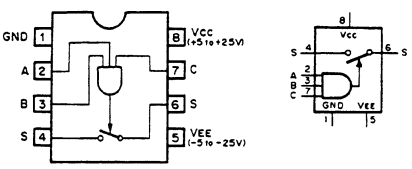
TL607CP (TI)
P-MOS ANALOG SWITCH
— TOP VIEW —



INPUTS		SW
A	EN	
X	0	OPEN
0	1	
1	1	

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

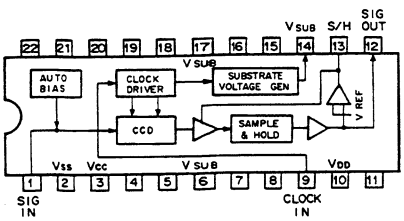
TL610CP (TI)
MOS ANALOG SWITCH
— TOP VIEW —



CONT IN			S
A	B	C	
0	X	X	OFF(OPEN)
X	0	X	OFF(OPEN)
X	X	0	OFF(OPEN)
1	1	1	ON(CLOSED)

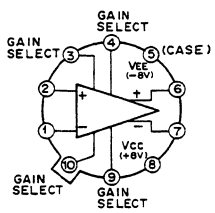
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TL8605P (TOSHIBA)
TL8605P-S (TOSHIBA)
CCD ANALOG PROCESSING UNIT
— TOP VIEW —

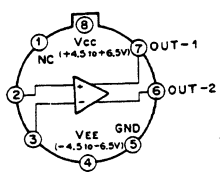


NC PIN ; 4 , 5 , 7 , 8 , 11 , 15 , 16 , 18 , 19 , 20 , 21 , 22

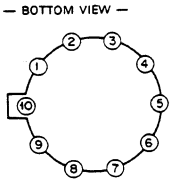
uA733HC (FSC)
DIFFERENTIAL VIDEO AMPLIFIER
— BOTTOM VIEW —



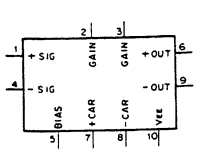
uA760HC (FSC)
HIGH SPEED VOLTAGE COMPARATOR
— TOP VIEW —



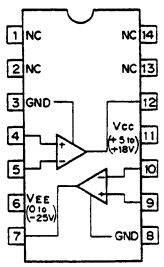
uA796HC (FSC)
uA796HCA (FSC)
DOUBLE-BALANCED MOD/DEMOD.
— BOTTOM VIEW —



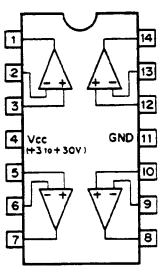
1 +SIGNAL INPUT
2 GAIN ADJUST
3 GAIN ADJUST
4 -SIGNAL INPUT
5 BIAS
6 +OUTPUT
7 +CARRIER INPUT
8 -CARRIER INPUT
9 -OUTPUT
10 VEE



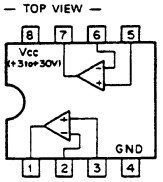
uPC272C (NEC)
uPC319C (NEC)
DUAL VOLTAGE COMPARATOR
- TOP VIEW -



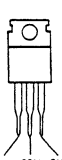
uPC324C (NEC)
QUAD. OP AMPLIFIER
— TOP VIEW —



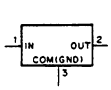
uPC358C (NEC)
DUAL OPERATIONAL AMPLIFIERS
— TOP VIEW —



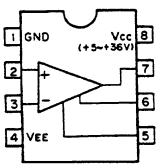
uPC78 ? ?H (NEC)
POSITIVE VOLTAGE REGULATOR (1A)



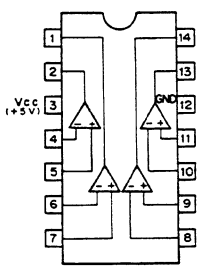
5V	μA7805UC	FS7805	μPC14305H	μPC7805H	HA17805P
6V	μA7806UC				HA17806P
7V					HA17807P
8V	μA7808UC		μPC14308H	μPC7808H	HA17808P
8.5V	μA7885UC				
12V	μA7812UC	FS7812	μPC14312H	μPC7812H	HA17812P
15V	μA7815UC	FS7815	μPC14315H	μPC7815H	HA17815P
18V	μA7818UC		μPC14318H	μPC7818H	HA17818P
24V	μA7824UC	FS7824	μPC14324H	μPC7824H	HA17824P



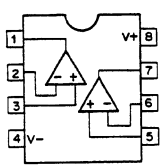
uPC311C (NEC)
VOLTAGE COMPARATOR
— TOP VIEW —



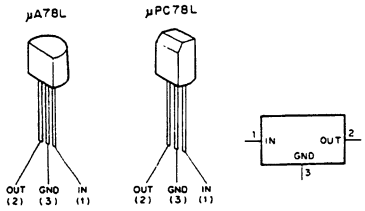
uPC339C (NEC)
COMPARATOR
— TOP VIEW —



uPC4557C (NEC)
OPERATIONAL AMPLIFIER (WIDE BAND, LOW NOISE)
— TOP VIEW —

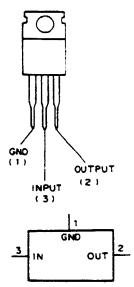


μPC78L ? ? (NEC)
POSITIVE VOLTAGE REGULATOR (100mA)



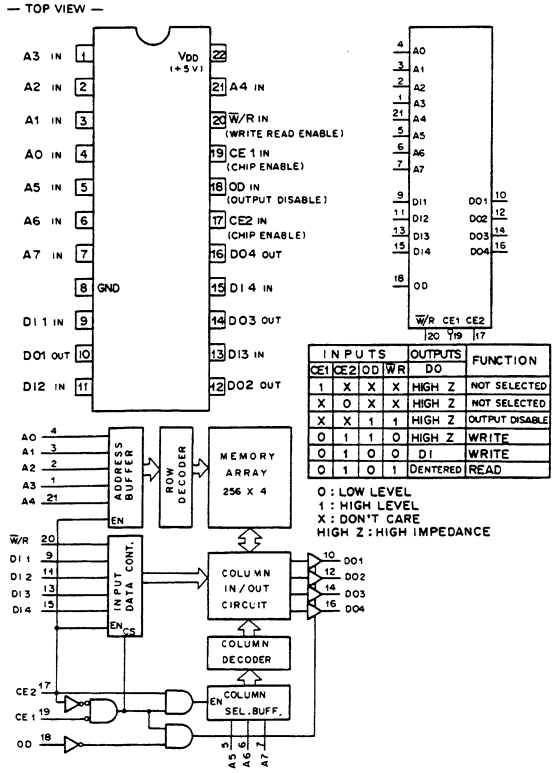
2.6V	μA78L26AWV	μA78L02ACL	
5V	μA78L05AWV	μA78L05ACL	μPC78L05(A)
6.2V	μA78L62AWV	μA78L06ACL	
8V		μA78L08ACL	μPC78L08
8.2V	μA78L82AWV		
9V	μA78L09AWV	μA78L09ACL	
10V		μA78L10ACL	
12V	μA78L12 AWV	μA78L12 ACL	μPC78L12
15V	μA78L15 AWV	μA78L15 ACL	μPC78L15
18V	μA78L18 AWV		
24V	μA78L24 AWV		

μPC79 ? ?H (NEC)
NEGATIVE VOLTAGE REGULATOR (1A)



− 5V	μA7905UC	FS7905	μPC7905H
− 6V	μA7906UC		
− 8V	μA7908UC		μPC7908H
−12V	μA7912UC		μPC7912H
−15V	μA7915UC		μPC7915H
−18V	μA7918UC		μPC7918H
−24V	μA7924UC		μPC7924H

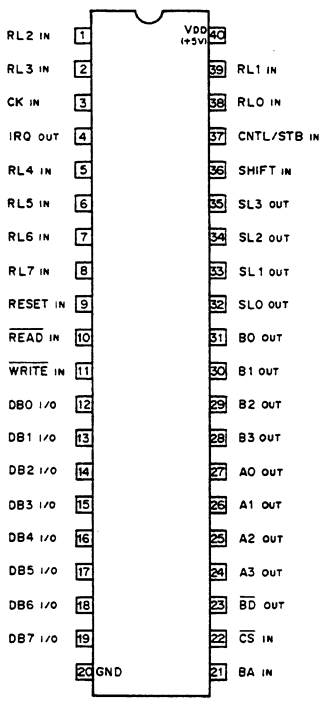
μPD5101LC-1 (NEC) (ACCESS TIME = 450 nS)
C-MOS 1024-BIT(256x4) STATIC RAM
— TOP VIEW —

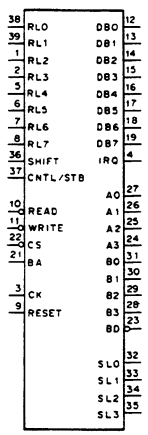


INPUTS				OUTPUTS	FUNCTION
CE1	CE2	OD	W/R	DO	
1	X	X	X	HIGH Z	NOT SELECTED
X	0	X	X	HIGH Z	NOT SELECTED
X	X	1	1	HIGH Z	OUTPUT DISABLE
0	1	1	0	HIGH Z	WRITE
0	1	0	0	DI	WRITE
0	1	0	1	DENTERED	READ

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE
HIGH Z : HIGH IMPEDANCE

μPD8279C-5 (NEC)
N-MOS PROGRAMMABLE KEYBOARD/DISPLAY CONTROLLER
— TOP VIEW —

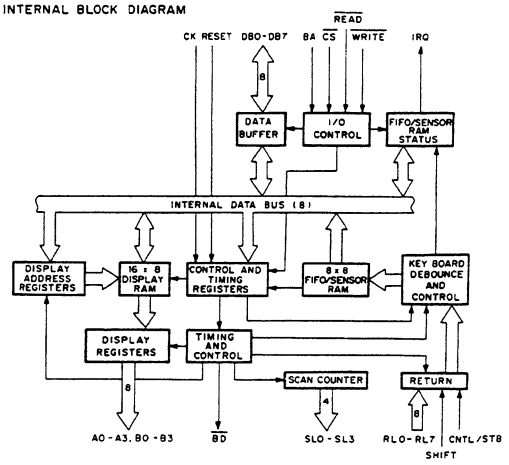




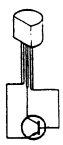
PIN NAMES

CK	; CLOCK
RESET	; RESET
$\overline{CS}$	; CHIP SELECT
$\overline{READ}$	; READ
$\overline{WRITE}$	; WRITE
BA	; BUFFER ADDRESS
IRQ	; INTERRUPT REQUEST
SLO-SL3	; SCAN LINES
RLO-RL7	; RETURN LINES
SHIFT	; SHIFT
CNTL/STB	; CONTROL/STROBE
AO-A3	; DISPLAY(A) OUTPUT
BO-B3	; DISPLAY(B) OUTPUT
$\overline{BD}$	; BLANK DISPLAY OUTPUT
DBO-DB7	; DATA BUS

INTERNAL BLOCK DIAGRAM



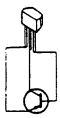
SEMICONDUCTOR ELECTRODES



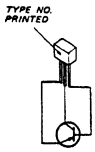
2SA1005
2SA1015
2SA733
2SA844



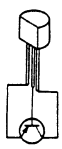
2SA1026



2SA1048
2SA1115



2SA1175
2SA1175F

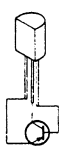


2SA1206

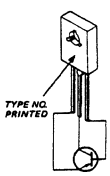
BOTTOM VIEW



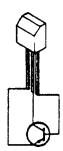
2SA530H
2SA711



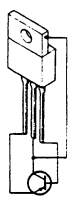
2SA772
2SA773
2SB739
2SB740



2SB649
2SB649A

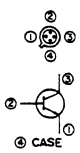


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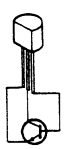


2SB856

BOTTOM VIEW



2SC1275



2SC1363
2SC1364
2SC2878
2SC641K
2SC945



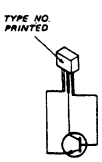
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2SC403C
2SC634A



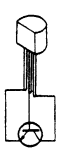
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2SC2011



2SC2458
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2SC2669
2SC2724
2SC403SP



2SC2785
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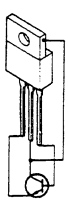


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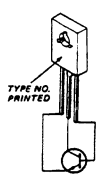
BOTTOM VIEW



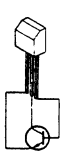
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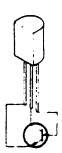
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2SD880



2SD669
2SD669A
2SD882

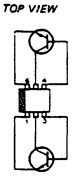


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2SD774



2SD788
2SD789

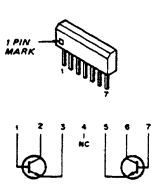
TOP VIEW



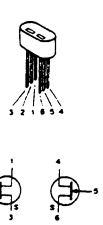
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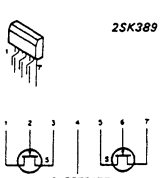
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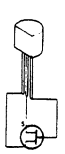
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2SK240



2SK389

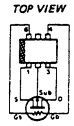


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2SK152
2SK43
2SK523



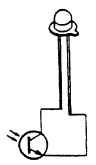
J175

TOP VIEW



TX429M

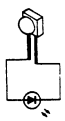
TPS601-B



GL-5HD5 ; RED



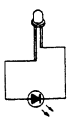
LN35BP ; GREEN



SE301A ; INFRARED



TLO124 ; ORANGE

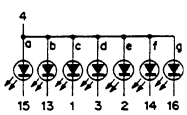


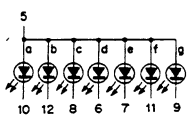
TOP VIEW

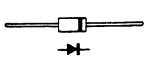
TLR-321 ; RED



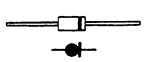




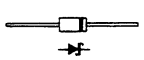




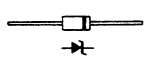
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1S1555
1S1587
1S2076
1S2473
1SS119
1SS133
1SS148
ERB12-02RK
GP08
QSCH-1754
SIB01-02
US1035



10YD ? ?



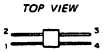
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1SS97
ERB81-004



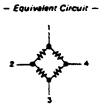
1SZ51
RD ? ?E

TOP VIEW

DM208



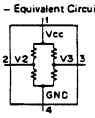
– Equivalent Circuit –



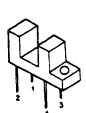
DM211



Magneto-Sensing Element
– Equivalent Circuit –



PS4005





SECTION 18
PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

PRINTED CIRCUIT BOARDS

The circuit information is provided below.

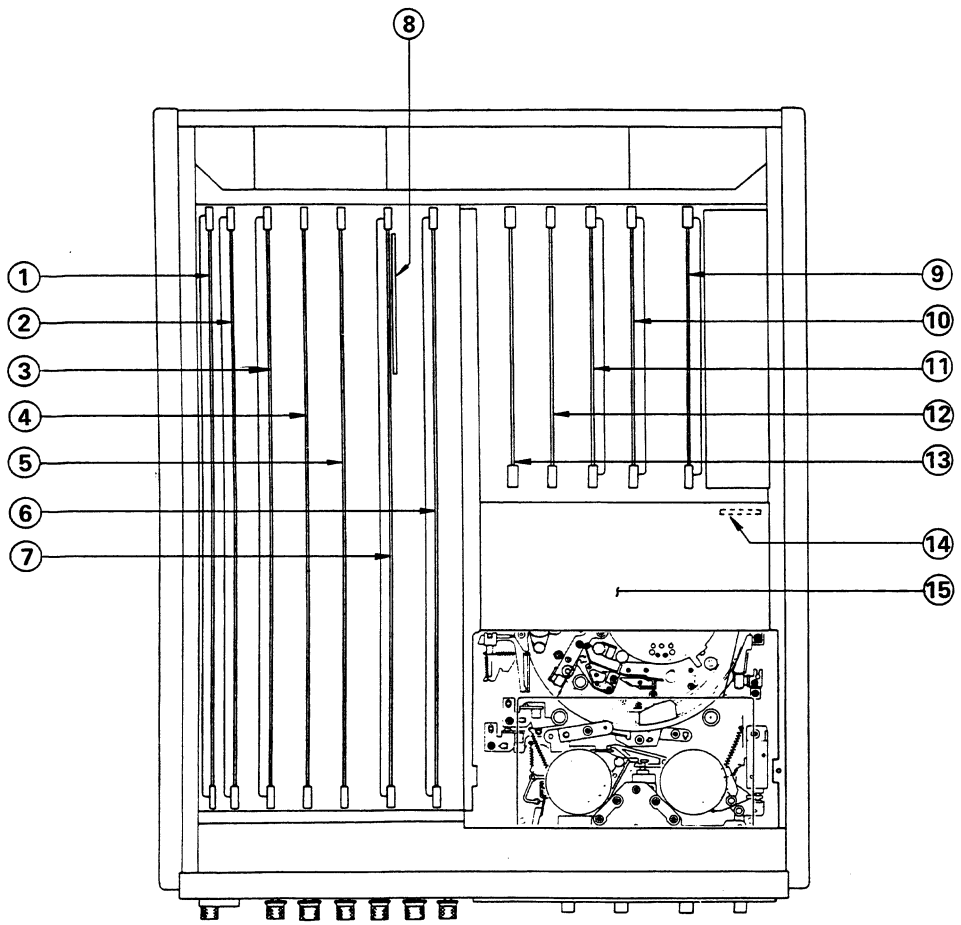
System	Board	Circuit function
Video	RP-15P	REC/PB amplifier
	YC-14P	Y/C modulator and demodulator
	DU-73	RF AGC
	SD-6P	Reference sync generator
	SD-8	Burst V axis alternator
	BC-5	Blanking switcher
	CC-15P	Chroma compressor
	CK-15P	Clock generator
	CK-16PS	Clock generator
	DEC-9	YC separator
	DEC-8P	Decoder
	EN-21P	Encoder
	RE-10	Rotary erase
Audio	AU-45	Audio system
	AU-46	Audio system
	BC-6	Blanking switcher
	BF-7	Audio buffer
	DR-21P	Bias erase osc
	HP-11	Headphones jack
	VR-10	Level control
Servo	SV-55P	Servo system
	SV-60	Servo system
	RD-2	Reel driver
	DE-11	Reel FG
	DU-53	Reel FG amplifier
Time code	DR-21P	Time code REC/PB
	TC-28P	Time code generator and reader
TBC	MY-17	Video TBC
	PR-48PS	Video TBC
	CK-14P	Video TBC
	CP-74P	TBC control panel

System	Board	Circuit function
System control	SY-4	System control
	MS-12	Miss-recording switch (photo-transistor)
	KY-45	Key panel
	KY-47	Select switch
	PT-9	Power transistor
	DP-31	Time counter display
	PC-9	Search dial
	PC-14	Search dial
	PD-22	Pinch solenoid
	PH-16	Tape roll sensor (photo-transistor)
	LE-19	Tape roll sensor (LED)
	RM-24	Remote connector
	SS-8	Tape beginning sensor Tape end sensor
	TR-18	Tape tension sensor
	SW-6	Select switch
	SW-7	Select switch
	SW-8	Select switch
	SW-13	Select switch
	TE-2	Threading/Unthreading end detector
	DR-21P	Driver
	LM-4	Threading motor
Power	AC-44	Line filter
Other	MB-49	Mother board
	MB-50	Mother board (for video and audio)
	MB-52	Mother board (for DR-21P and TC-28P)
	MB-73	Mother board (for TBC)
	PC-17	Cassette-up compartment
	PC-18	Cassette-up compartment
	CL-7	Cassette-up compartment

System	Board	Circuit function
Other	CP-61	Input amplifier
	CP-62	Relay board for input video
	HE-5	Relay board
	EX-35	Extension board
	EX-36	Extension board
	EX-42	Extension board

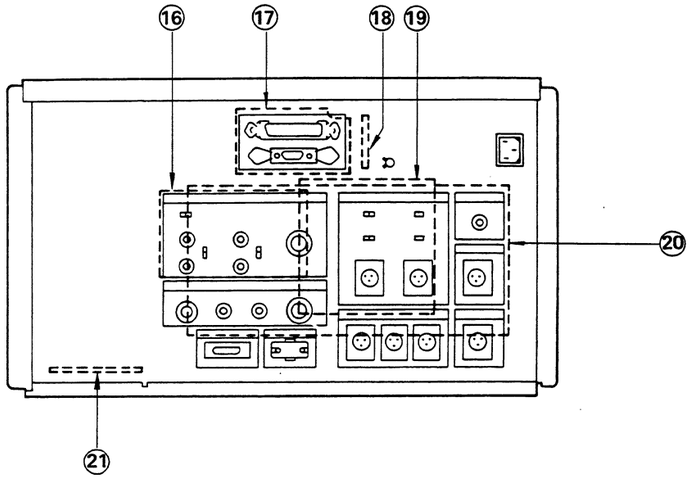
LOCATION OF THE PRINTED CIRCUIT BOARD

<TOP VIEW>

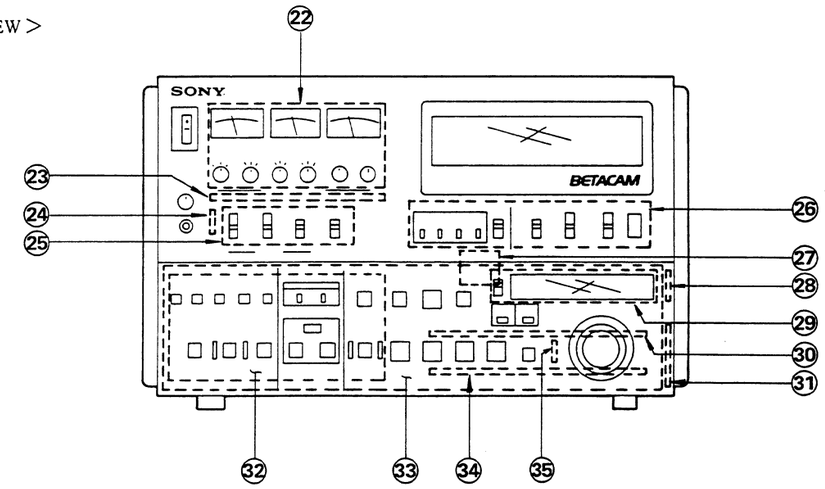


① CK-14P board
② MY-17 board
③ PR-48PS board
④ EN-21P board
⑤ YC-14P board
⑥ SY-4 board
⑦ SV-55P board
⑧ SV-60 board
⑨ AU-46 board
⑩ AU-45 board
⑪ DEC-9 board
⑫ DEC-8P board
⑬ CC-15P board
⑭ RE-10 board
⑮ RP-15P board

<REAR VIEW>

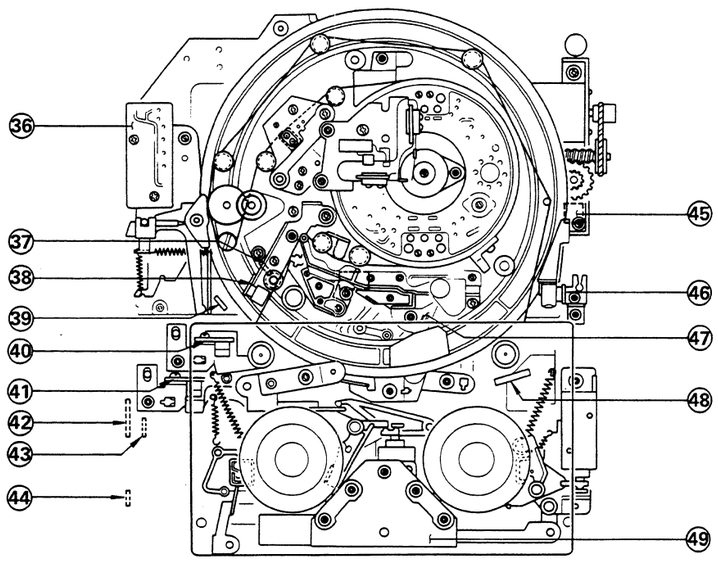


<FRONT VIEW>



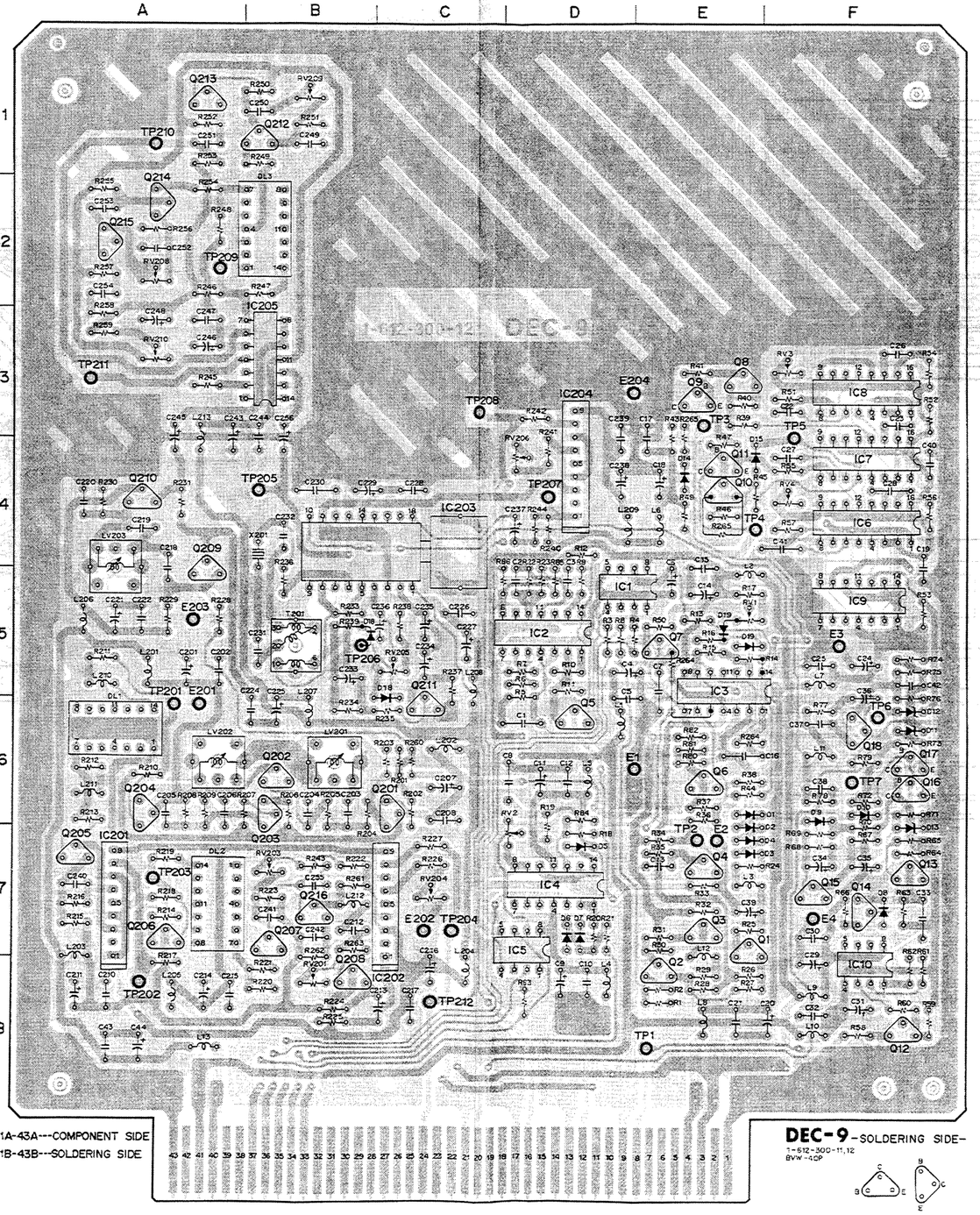
16 CP-62 board
17 RM-24 board
18 AC-44 board
19 SD-6P board
20 CP-61 board
21 BC-6 board
22 BF-7 board
23 VR-10 board
24 HP-11 board
25 SW-6 board
26 SW-7 board
27 DU-53 board
28 PC-9 board
29 DP-31 board
30 DR-21P board
31 BC-5 board
32 CP-74P board
33 KY-45 board
34 TC-28P board
35 PC-14 board

<TOP VIEW>



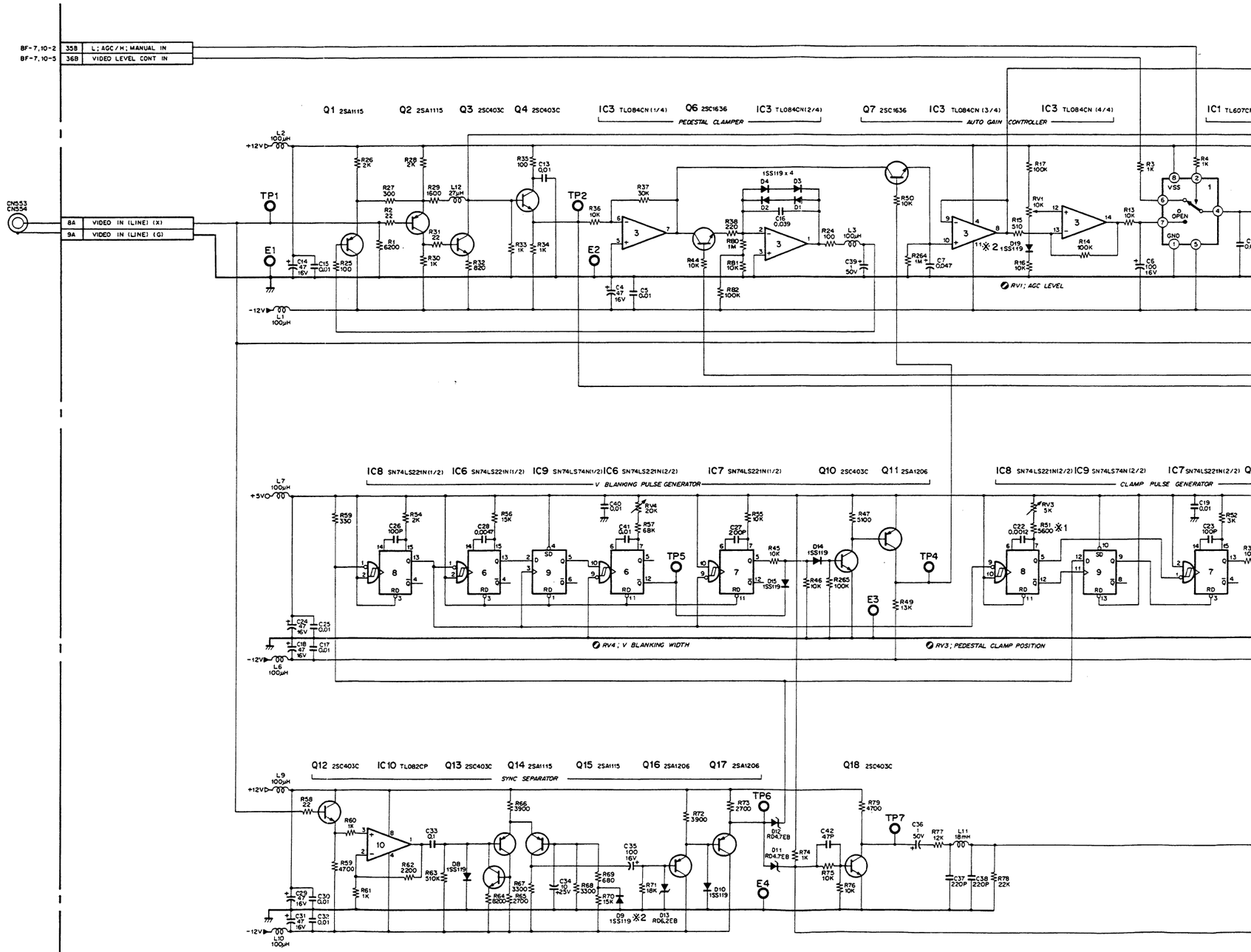
36 PD-22 board
37 PH-16 board
38 SS-8 board
39 LE-19 board
40 TE-2 board
41 TE-2 board
42 CL-7 board (cassette-up compartment)
43 PC-18 board (cassette-up compartment)
44 PC-17 board (cassette-up compartment)
45 LM-4 board
46 SS-8 board
47 TR-18 board
48 MS-12 board
49 DE-11 board

DEC-9 (Y/C SEPARATOR)



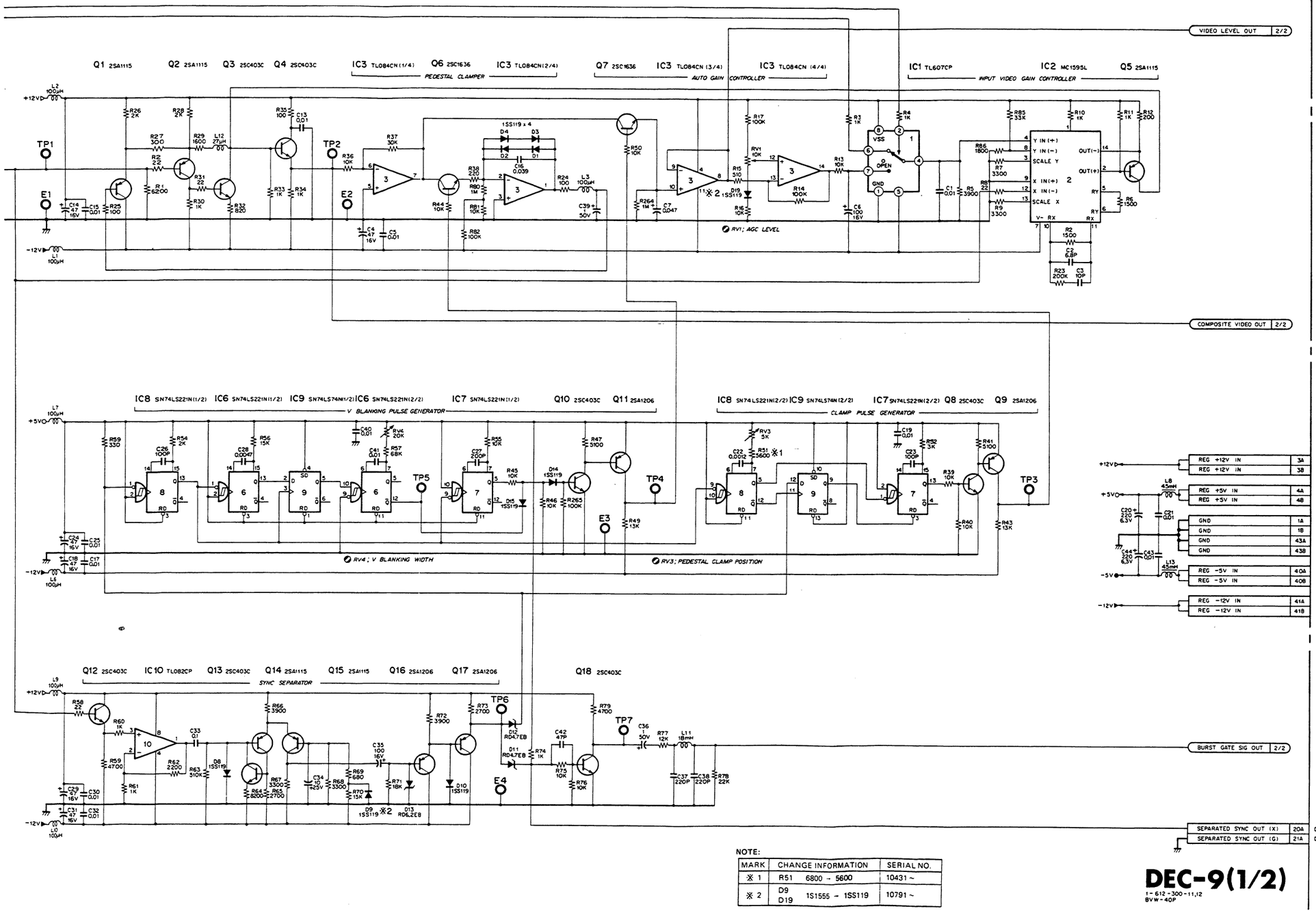
D1	E - 6	RV1	E - 5				
D2	E - 6	RV2	D - 7				
D3	E - 7	RV3	F - 3				
D4	E - 7	RV4	F - 4				
D5	D - 7	RV201	B - 8				
D6	D - 7	RV203	B - 7				
D7	D - 7	RV204	C - 7				
D8	F - 7	RV205	C - 5				
D9	F - 6	RV206	D - 4				
D10	F - 6	RV208	A - 2				
D11	F - 6	RV209	B - 1				
D12	F - 6	RV210	A - 3				
D13	F - 6						
D14	E - 4	T201	B - 5				
D15	E - 4						
D18	C - 5	TP1	E - 8				
D19	E - 5	TP2	E - 7				
		TP3	E - 3				
DL1	A - 6	TP4	E - 4				
DL2	A - 7	TP5	F - 3				
DL3	B - 2	TP6	F - 6				
		TP7	F - 6				
E1	D - 6	TP201	A - 6				
E2	E - 7	TP202	A - 8				
E3	F - 5	TP203	A - 7				
E4	F - 7	TP204	C - 7				
E201	A - 6	TP205	B - 4				
E202	C - 7	TP206	B - 5				
E203	A - 5	TP207	D - 4				
E204	D - 3	TP208	C - 3				
		TP209	A - 2				
IC1	D - 5	TP210	A - 1				
IC2	D - 5	TP211	A - 3				
IC3	E - 5	TP212	C - 8				
IC4	D - 7						
IC5	D - 7	X201	B - 4				
IC6	F - 4						
IC7	F - 1						
IC8	F - 3						
IC9	F - 5						
IC10	F - 8						
IC201	A - 7						
IC202	C - 7						
IC203	C - 1						
IC204	D - 3						
IC205	B - 3						
LV201	B - 6						
LV202	A - 6						
LV203	A - 4						
Q1	E - 7						
Q2	E - 8						
Q3	E - 7						
Q4	E - 7						
Q5	D - 6						
Q6	E - 6						
Q7	E - 5						
Q8	E - 3						
Q9	E - 3						
Q10	E - 4						
Q11	E - 4						
Q12	F - 8						
Q13	F - 7						
Q14	F - 7						
Q15	F - 7						
Q16	F - 6						
Q17	F - 6						
Q18	F - 6						
Q201	C - 6						
Q202	B - 6						
Q203	B - 6						
Q204	A - 6						
Q205	A - 7						
Q206	A - 7						
Q207	B - 7						
Q208	B - 8						
Q209	A - 4						
Q210	A - 1						
Q211	C - 6						
Q212	B - 1						
Q213	A - 1						
Q214	A - 2						
Q215	A - 2						
Q216	B - 7						

DEC-9 (1/2) (Y/C SEPARATOR)



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	R51 6800 → 5600	10431 ~
※2	D9 D19 1S1555 → 1SS119	10791 ~



NOTE:

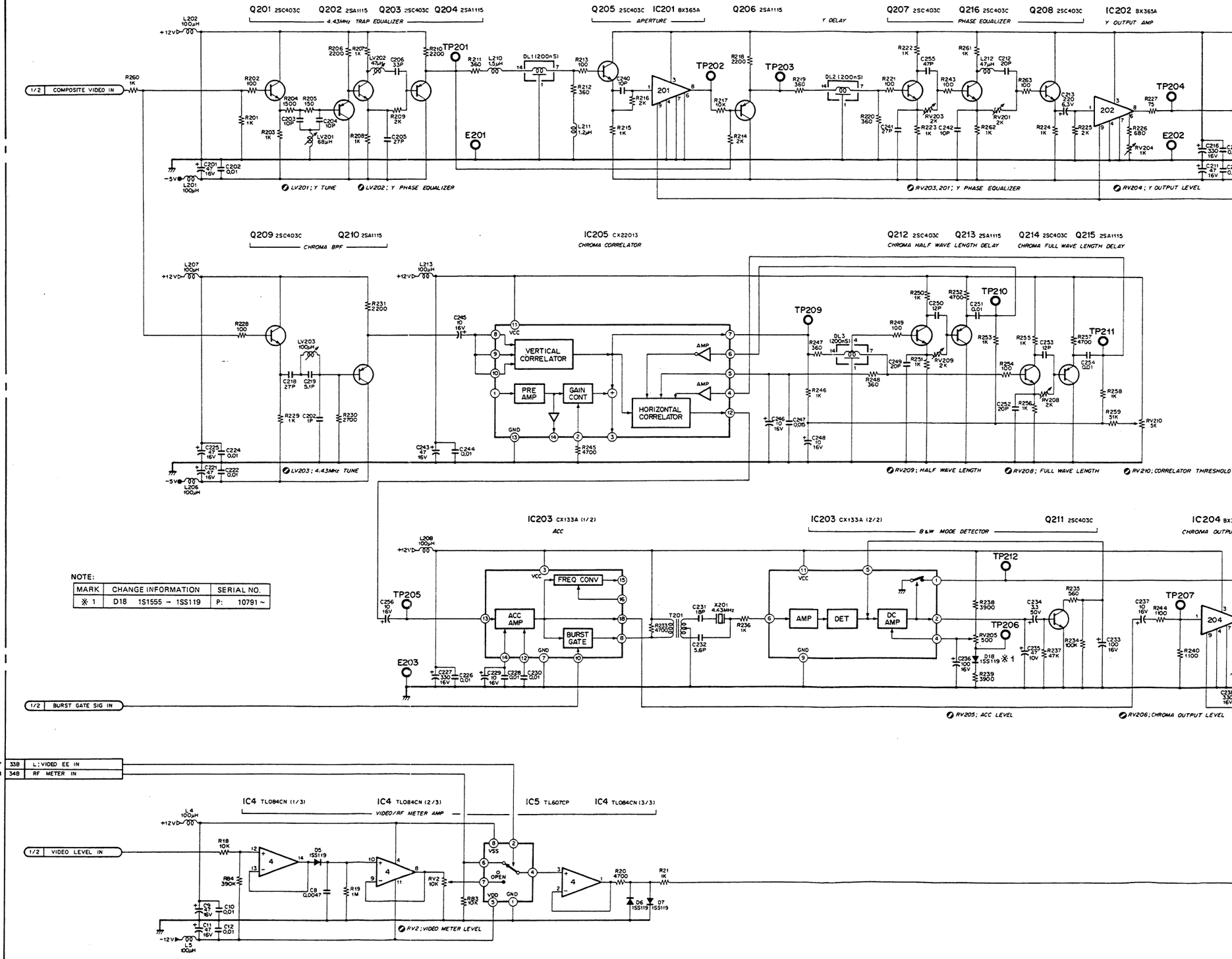
MARK	CHANGE INFORMATION	SERIAL NO.
※1	R51 6800 → 5600	10431 ~
※2	D9, D19 1S1555 → 1SS119	10791 ~

DEC-9(1/2)

1-612-300-11,12
8VW-40P

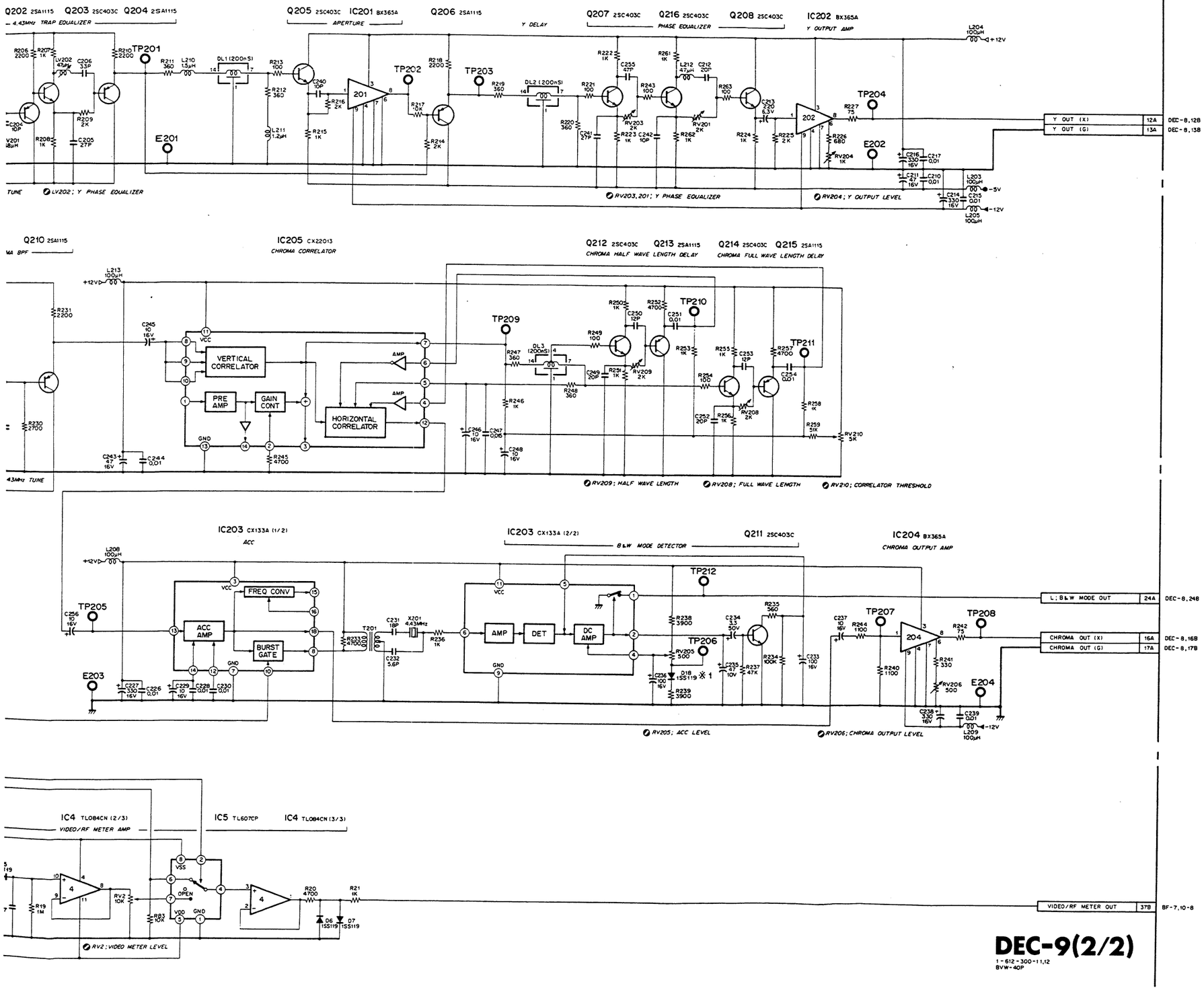
DEC-9 (2/2)

DEC-9 (2/2) (Y/C SEPARATOR)



NOTE:

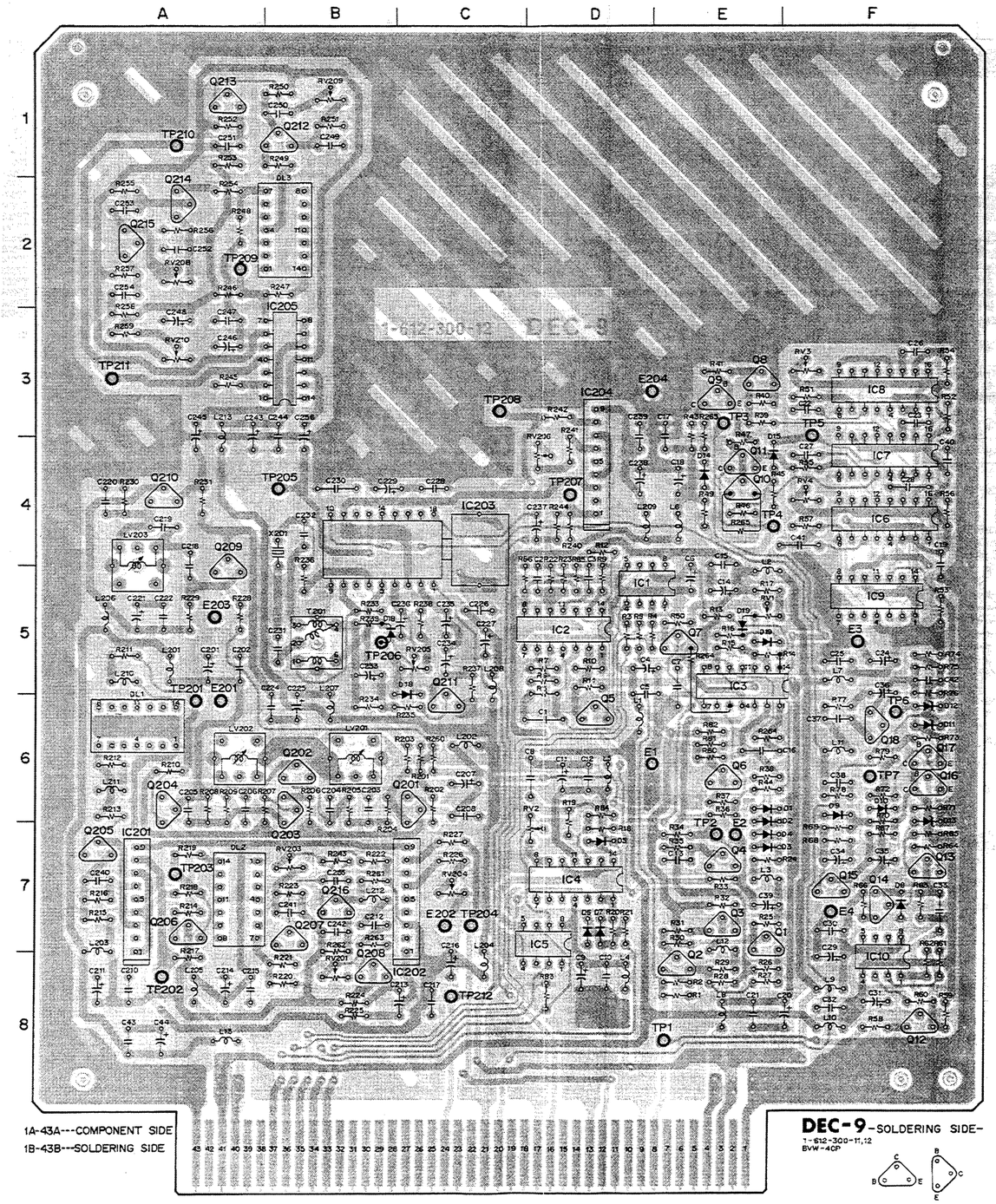
MARK	CHANGE INFORMATION	SERIAL NO.
※ 1	D18 1S1555 → 1SS119	P: 10791 ~



DEC-9(2/2)

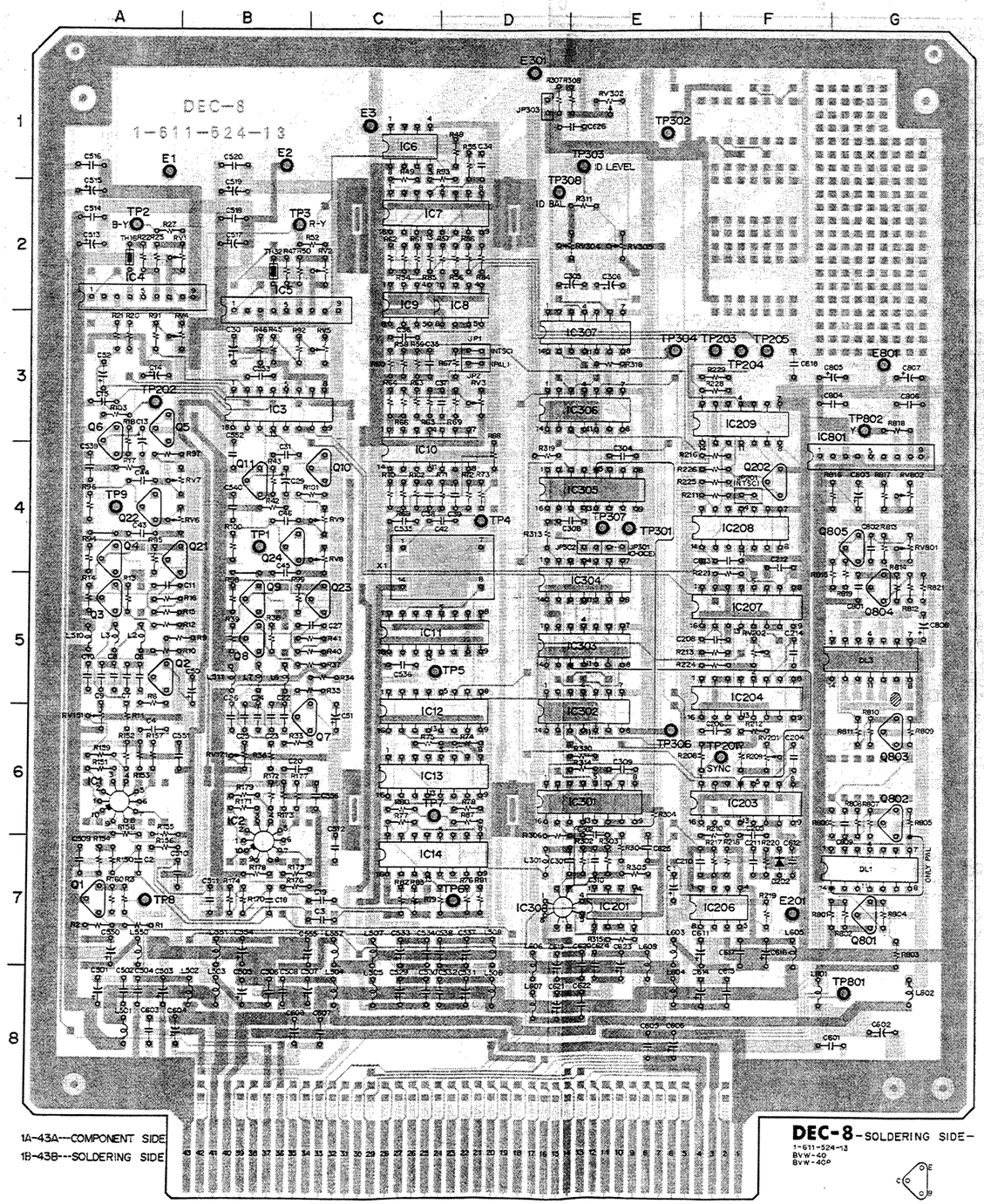
1-612-300-11,12
BVW-40P

DEC-9 (Y/C SEPARATOR)



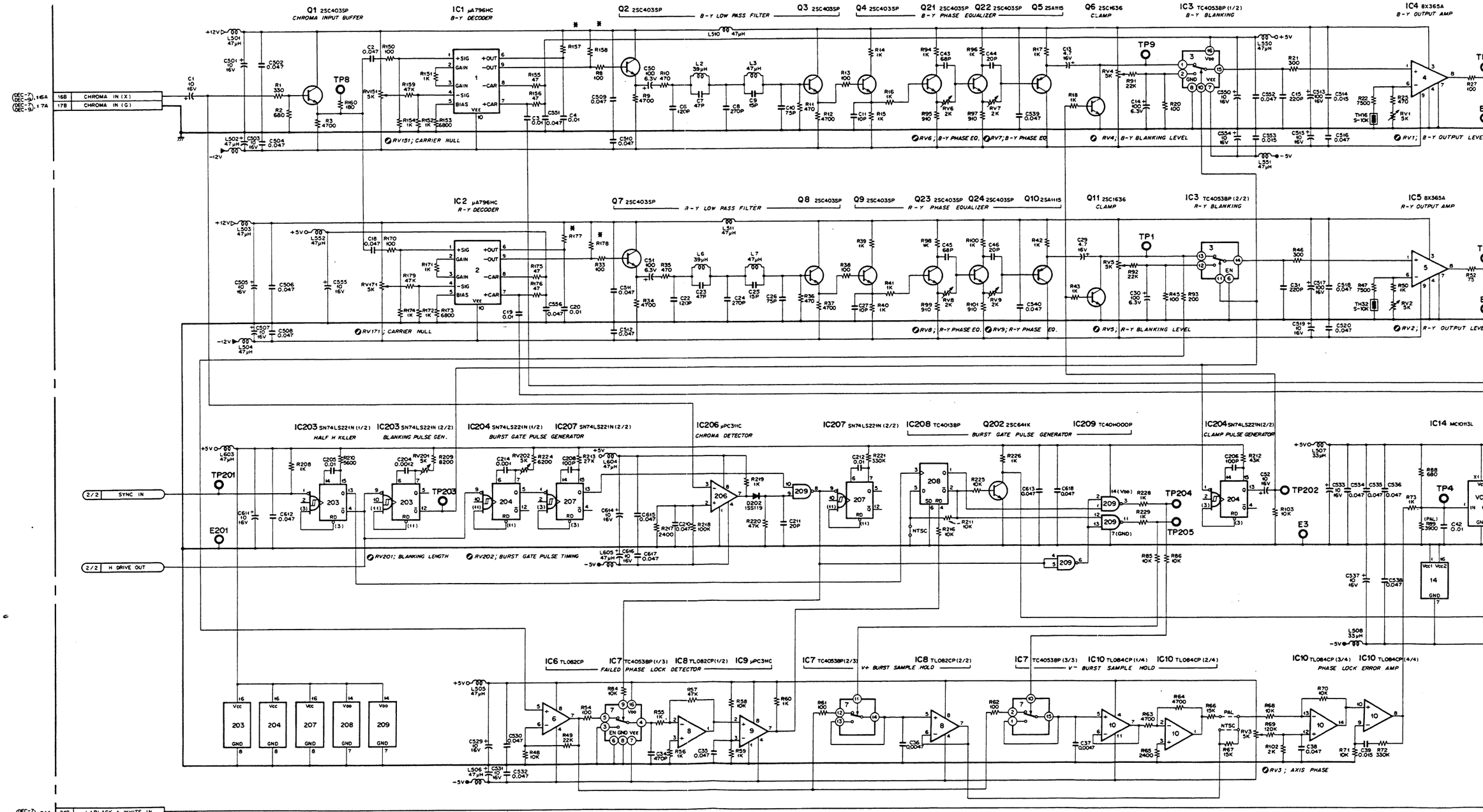
D1	E - 6	RV1	E - 5
D2	E - 6	RV2	D - 7
D3	E - 7	RV3	F - 3
D4	E - 7	RV4	F - 1
D5	D - 7	RV201	B - 8
D6	D - 7	RV203	B - 7
D7	D - 7	RV204	C - 7
D8	F - 7	RV205	C - 5
D9	F - 6	RV206	D - 4
D10	F - 6	RV208	A - 2
D11	F - 6	RV209	B - 1
D12	F - 6	RV210	A - 3
D13	F - 6		
D14	E - 4	T201	B - 5
D15	E - 4		
D18	C - 5	TP1	E - 8
D19	E - 5	TP2	E - 7
		TP3	E - 3
DL1	A - 6	TP4	E - 4
DL2	A - 7	TP5	F - 3
DL3	B - 2	TP6	F - 6
		TP7	F - 6
E1	D - 6	TP201	A - 6
E2	E - 7	TP202	A - 8
E3	F - 5	TP203	A - 7
E4	F - 7	TP204	C - 7
E201	A - 6	TP205	B - 4
E202	C - 7	TP206	B - 5
E203	A - 5	TP207	D - 4
E204	D - 3	TP208	C - 3
		TP209	A - 2
IC1	D - 5	TP210	A - 1
IC2	D - 5	TP211	A - 3
IC3	E - 5	TP212	C - 8
IC4	D - 7		
IC5	D - 7	X201	B - 4
IC6	F - 4		
IC7	F - 4		
IC8	F - 3		
IC9	F - 5		
IC10	F - 8		
IC201	A - 7		
IC202	C - 7		
IC203	C - 4		
IC204	D - 3		
IC205	B - 3		
LV201	B - 6		
LV202	A - 6		
LV203	A - 4		
Q1	E - 7		
Q2	E - 8		
Q3	E - 7		
Q4	E - 7		
Q5	D - 6		
Q6	E - 6		
Q7	E - 5		
Q8	E - 3		
Q9	E - 3		
Q10	E - 4		
Q11	E - 4		
Q12	F - 8		
Q13	F - 7		
Q14	F - 7		
Q15	F - 7		
Q16	F - 6		
Q17	F - 6		
Q18	F - 6		
Q201	C - 6		
Q202	B - 6		
Q203	B - 6		
Q204	A - 6		
Q205	A - 7		
Q206	A - 7		
Q207	B - 7		
Q208	B - 8		
Q209	A - 4		
Q210	A - 4		
Q211	C - 6		
Q212	B - 1		
Q213	A - 1		
Q214	A - 2		
Q215	A - 2		
Q216	B - 7		

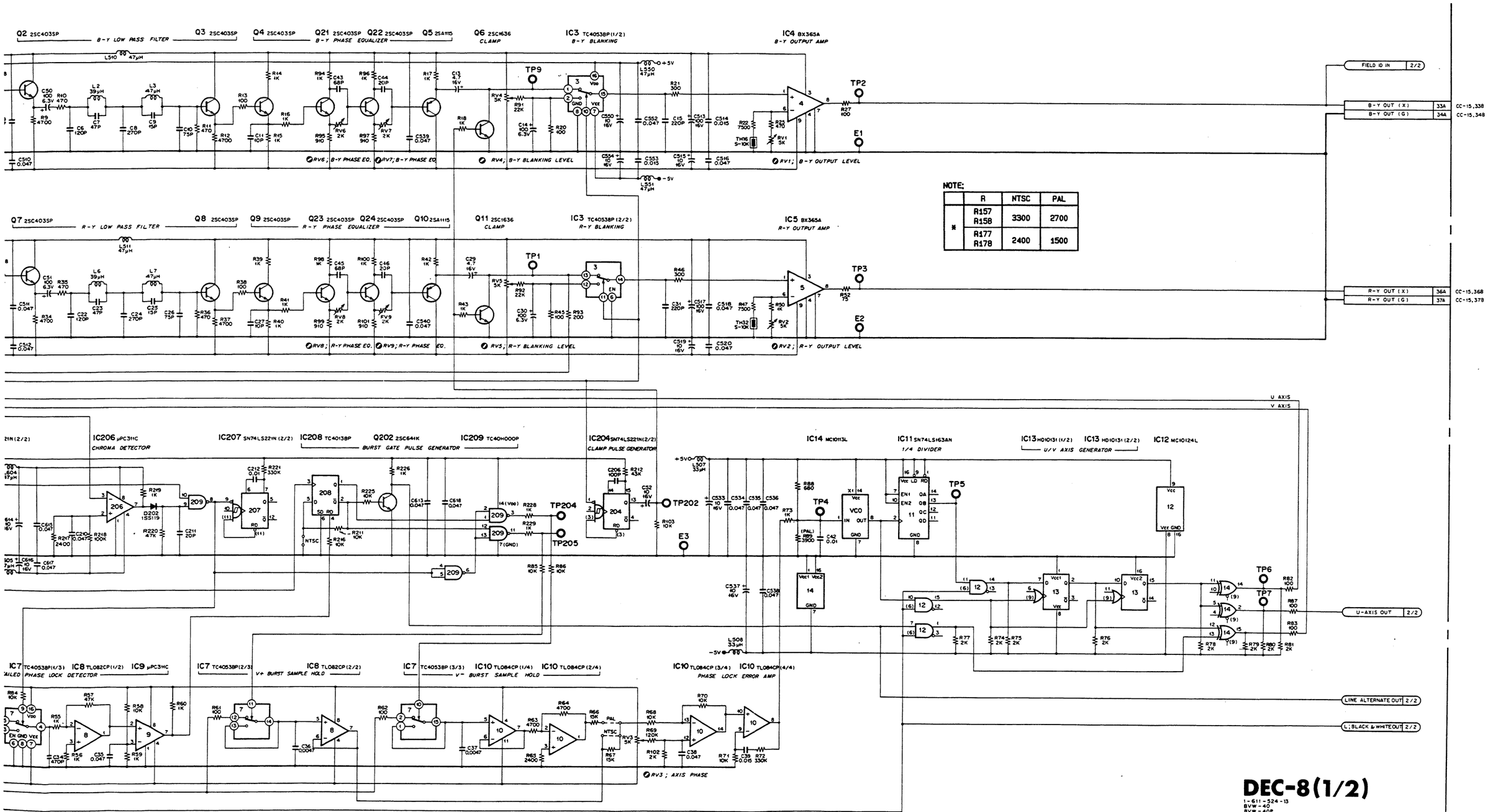
DEC-8 (VIDEO DECODER)



D202	F - 7			TH16	A - 2		
				TH32	B - 2		
DL1	G - 7						
DL3	G - 5			TP1	B - 4		
				TP2	A - 2		
E1	A - 1			TP3	B - 2		
E2	B - 1			TP4	D - 4		
E3	C - 1			TP5	C - 5		
E201	F - 7			TP6	D - 7		
E301	D - 1			TP7	C - 6		
E801	G - 3			TP8	A - 7		
				TP9	A - 4		
IC1	A - 6			TP201	F - 6		
IC2	B - 7			TP202	A - 3		
IC3	B - 3			TP203	F - 3		
IC4	A - 2			TP204	F - 3		
IC5	B - 2			TP205	F - 3		
IC6	C - 1			TP301	E - 4		
IC7	C - 2			TP302	E - 1		
IC8	D - 2			TP303	E - 1		
IC9	C - 2			TP304	E - 3		
IC10	C - 4			TP306	E - 6		
IC11	C - 5			TP307	E - 4		
IC12	C - 6			TP308	D - 2		
IC13	C - 6			TP801	G - 8		
IC14	C - 7			TP802	G - 3		
IC201	E - 7						
IC203	F - 6			X1	D - 4		
IC204	F - 5						
IC206	F - 7						
IC207	F - 5						
IC208	F - 4						
IC209	F - 3						
IC301	E - 6						
IC302	E - 6						
IC303	E - 5						
IC304	E - 5						
IC305	E - 4						
IC306	E - 3						
IC307	E - 3						
IC308	D - 7						
IC801	G - 4						
Q1	A - 7						
Q2	A - 5						
Q3	A - 5						
Q4	A - 4						
Q5	A - 3						
Q6	A - 3						
Q7	C - 6						
Q8	B - 5						
Q9	B - 5						
Q10	C - 4						
Q11	B - 4						
Q21	B - 4						
Q22	A - 4						
Q23	C - 5						
Q24	B - 4						
Q202	F - 4						
Q801	G - 7						
Q802	G - 6						
Q803	G - 6						
Q804	G - 5						
Q805	G - 4						
RV1	B - 2						
RV2	C - 2						
RV3	D - 3						
RV4	B - 3						
RV5	C - 3						
RV6	B - 4						
RV7	B - 4						
RV8	C - 4						
RV9	C - 4						
RV151	A - 6						
RV171	B - 6						
RV201	F - 6						
RV202	F - 5						
RV302	E - 1						
RV304	E - 2						
RV305	E - 2						
RV801	G - 4						
RV802	G - 4						

DEC-8 (1/2) (VIDEO DECODER)





NOTE:

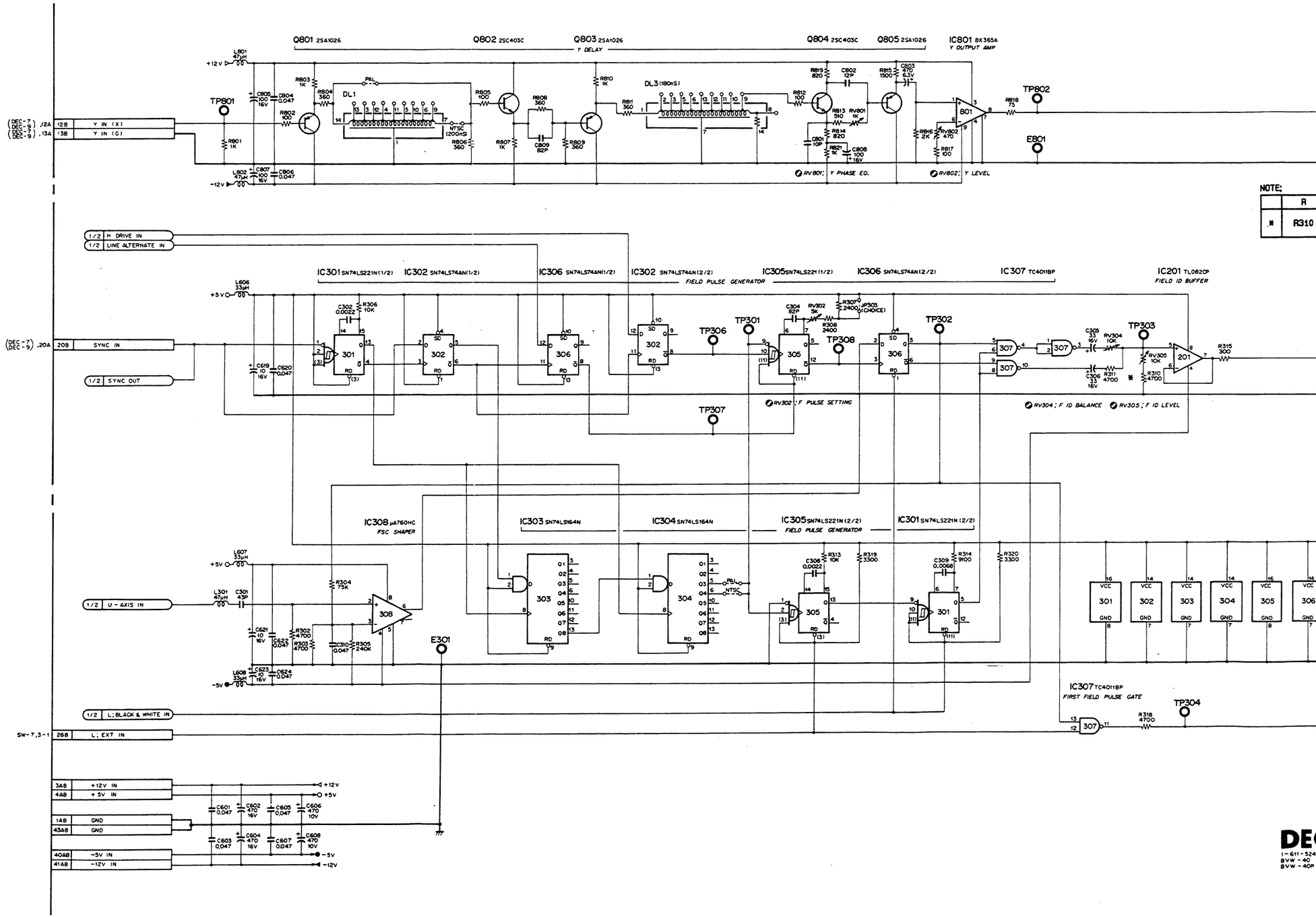
	R	NTSC	PAL
*	R157 R158	3300	2700
	R177 R178	2400	1500

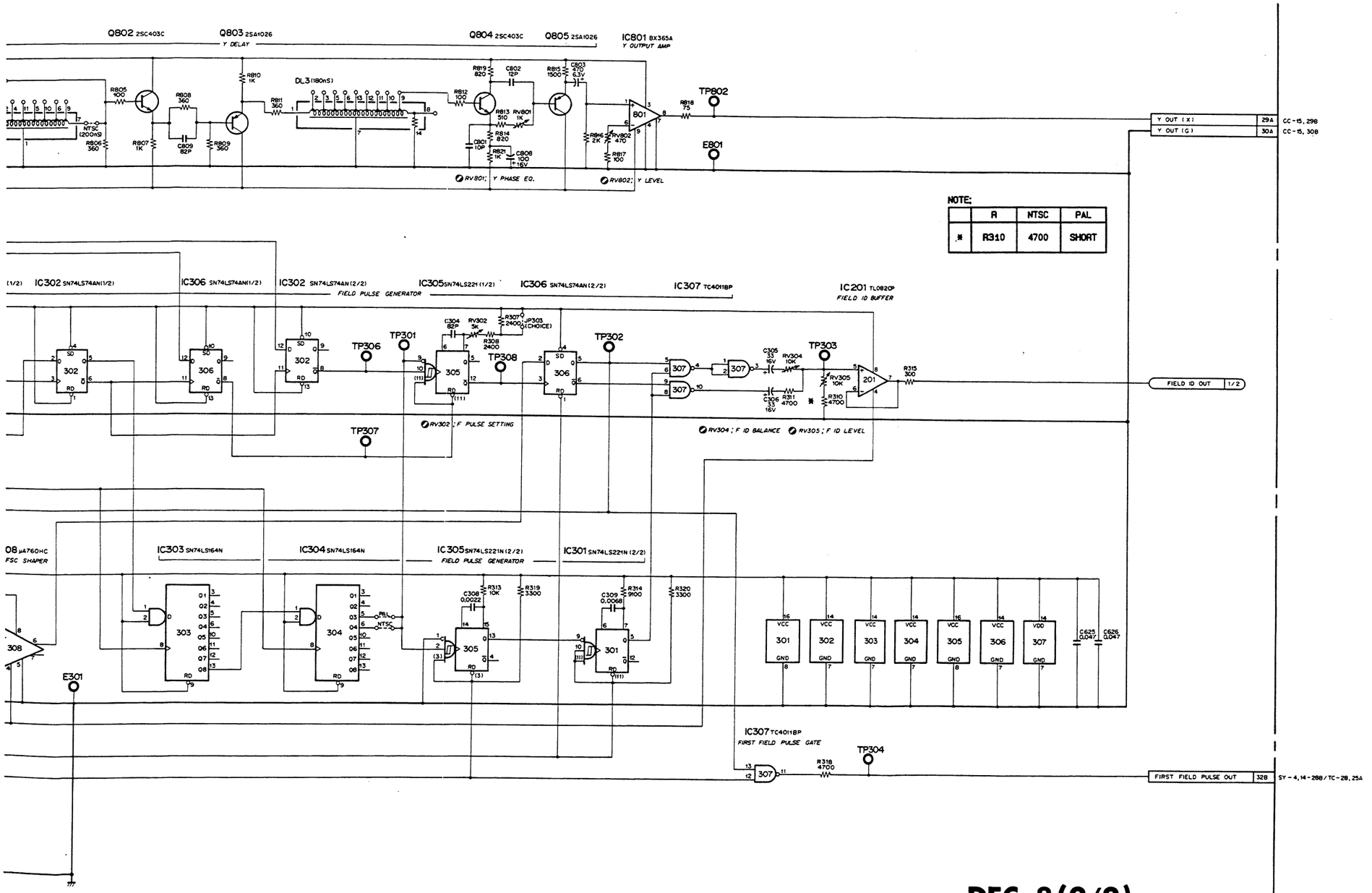
DEC-8 (1/2)

1-611-524-13
BVW-40
BVW-40P

DEC-8 (2/2)

DEC-8 (2/2) (VIDEO DECODER)

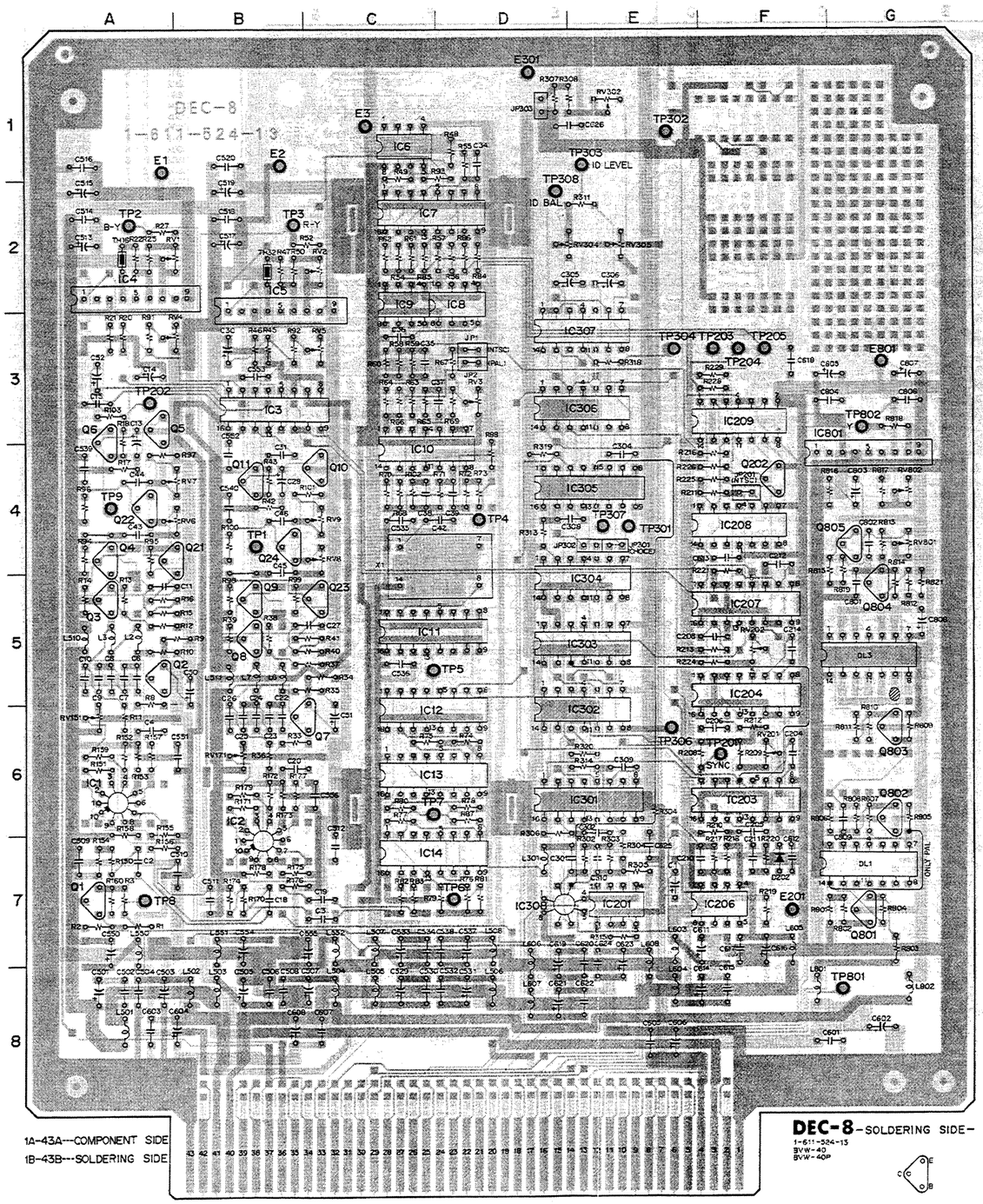




DEC-8(2/2)

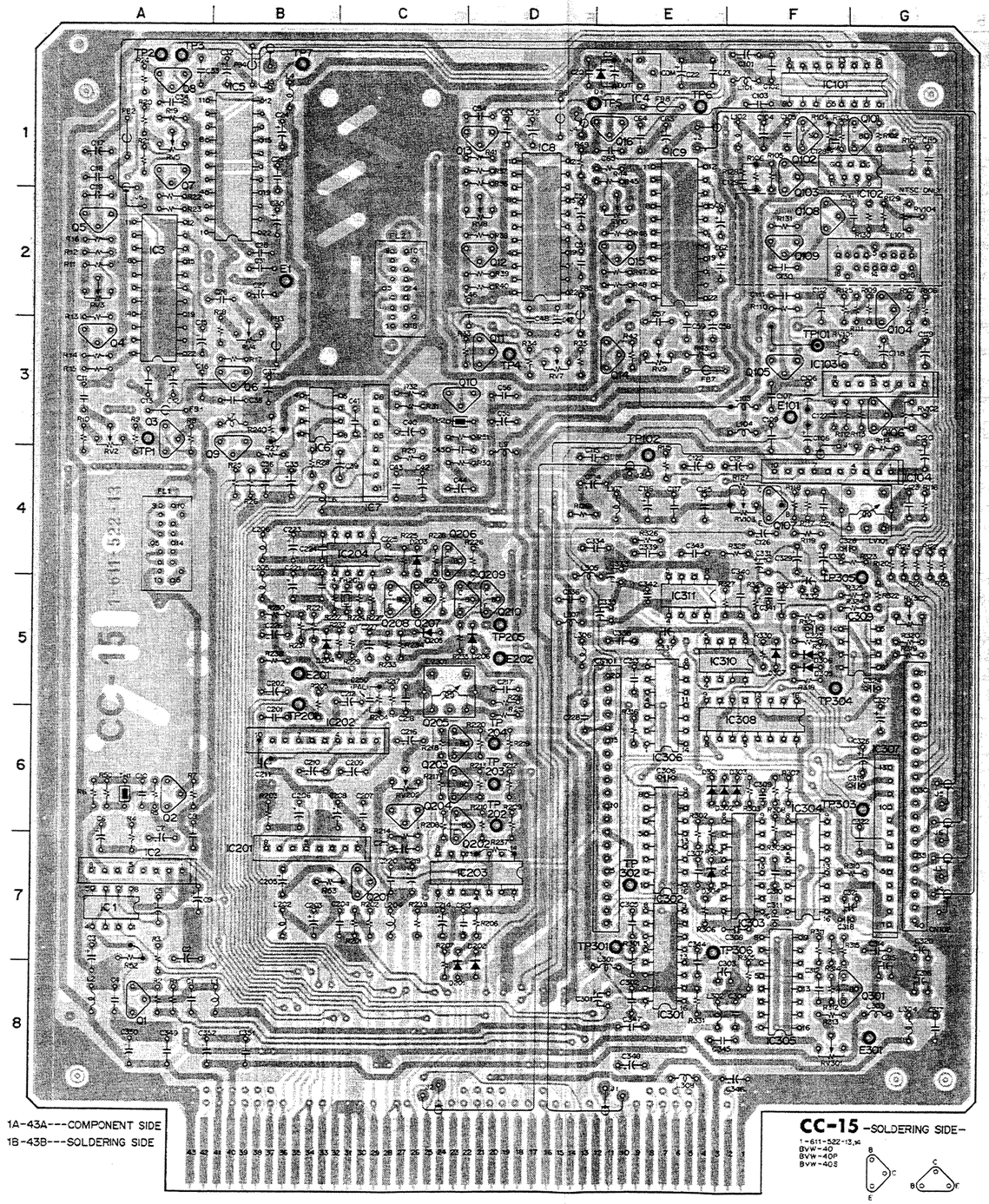
1-611-524-13
BVW-40
BVW-40P

DEC-8 (VIDEO DECODER)



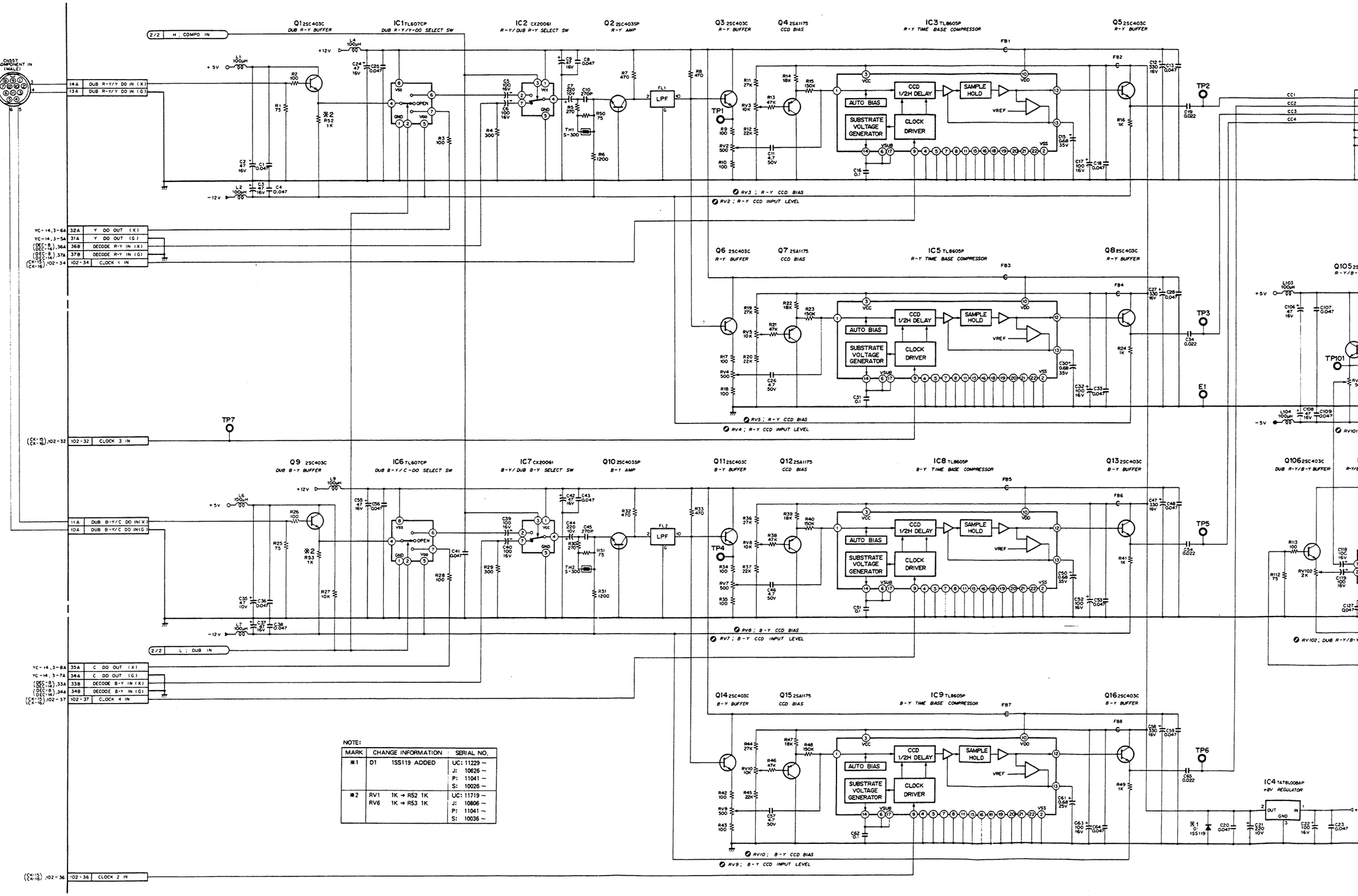
D202	F - 7	TH16	A - 2
		TH32	B - 2
DL1	G - 7		
DL3	G - 5	TP1	B - 4
		TP2	A - 2
E1	A - 1	TP3	B - 2
E2	B - 1	TP4	D - 4
E3	C - 1	TP5	C - 5
E201	F - 7	TP6	D - 7
E301	D - 1	TP7	C - 6
E801	G - 3	TP8	A - 7
		TP9	A - 4
IC1	A - 6	TP201	F - 6
IC2	B - 7	TP202	A - 3
IC3	B - 3	TP203	F - 3
IC4	A - 2	TP204	F - 3
IC5	B - 2	TP205	F - 3
IC6	C - 1	TP301	E - 4
IC7	C - 2	TP302	E - 1
IC8	D - 2	TP303	E - 1
IC9	C - 2	TP304	E - 3
IC10	C - 4	TP306	E - 6
IC11	C - 5	TP307	E - 4
IC12	C - 6	TP308	D - 2
IC13	C - 6	TP801	G - 8
IC14	C - 7	TP802	G - 3
IC201	E - 7		
IC203	F - 6	X1	D - 4
IC204	F - 5		
IC206	F - 7		
IC207	F - 5		
IC208	F - 4		
IC209	F - 3		
IC301	E - 6		
IC302	E - 6		
IC303	E - 5		
IC304	E - 5		
IC305	E - 4		
IC306	E - 3		
IC307	E - 3		
IC308	D - 7		
IC801	G - 4		
Q1	A - 7		
Q2	A - 5		
Q3	A - 5		
Q4	A - 4		
Q5	A - 3		
Q6	A - 3		
Q7	C - 6		
Q8	B - 5		
Q9	B - 5		
Q10	C - 4		
Q11	B - 4		
Q21	B - 4		
Q22	A - 4		
Q23	C - 5		
Q24	B - 4		
Q202	F - 4		
Q801	G - 7		
Q802	G - 6		
Q803	G - 6		
Q804	G - 5		
Q805	G - 4		
RV1	B - 2		
RV2	C - 2		
RV3	D - 3		
RV4	B - 3		
RV5	C - 3		
RV6	B - 4		
RV7	B - 4		
RV8	C - 4		
RV9	C - 4		
RV151	A - 6		
RV171	B - 6		
RV201	F - 6		
RV202	F - 5		
RV302	E - 1		
RV304	E - 2		
RV305	E - 2		
RV801	G - 4		
RV802	G - 4		

CC-15 (CHROMA TIME DIVISION MULTIPLEXER)



CN101	E - 6	RV2	A - 3
CN102	G - 7	RV3	A - 2
		RV4	B - 3
D1	E - 1	RV5	A - 1
D201	C - 8	RV7	D - 3
D202	D - 8	RV8	D - 2
D203	C - 4	RV9	E - 3
D204	B - 5	RV10	E - 2
D205	C - 5	RV101	F - 3
D206	D - 5	RV102	G - 3
D301	E - 6	RV103	F - 4
D302	E - 6	RV104	G - 2
D303	F - 6	RV202	C - 6
D304	E - 7	RV301	F - 8
D305	F - 5	RV302	G - 5
D306	F - 5		
D307	F - 5	TH1	A - 6
		TH2	C - 3
E1	B - 2	TH201	C - 5
E101	F - 3		
E201	B - 5	TP1	A - 3
E202	D - 5	TP2	A - 1
E301	G - 8	TP3	A - 1
		TP4	D - 3
FL1	A - 4	TP5	D - 1
FL2	C - 2	TP6	E - 1
FL101	G - 2	TP7	B - 1
		TP101	F - 3
IC1	A - 7	TP102	E - 4
IC2	A - 7	TP201	B - 5
IC3	A - 2	TP202	D - 6
IC4	E - 1	TP203	D - 6
IC5	B - 1	TP204	D - 6
IC6	B - 3	TP205	D - 5
IC7	C - 4	TP301	E - 7
IC8	D - 2	TP302	E - 7
IC9	E - 2	TP303	G - 6
IC101	F - 1	TP304	F - 5
IC102	G - 1	TP305	G - 5
IC103	G - 3	TP306	E - 7
IC104	G - 4		
IC201	B - 7		
IC202	B - 6		
IC203	D - 7		
IC204	C - 4		
IC301	E - 8		
IC302	E - 7		
IC303	F - 7		
IC304	F - 7		
IC305	F - 8		
IC306	E - 6		
IC307	G - 6		
IC308	F - 6		
IC309	G - 5		
IC310	E - 5		
IC311	E - 5		
LV101	G - 4		
LV201	C - 5		
Q1	A - 8		
Q2	A - 6		
Q3	A - 3		
Q4	A - 3		
Q5	A - 2		
Q6	B - 3		
Q7	A - 1		
Q8	A - 1		
Q9	B - 1		
Q10	C - 3		
Q11	D - 3		
Q12	D - 2		
Q13	D - 1		
Q14	E - 3		
Q15	E - 2		
Q16	E - 1		
Q101	G - 1		
Q102	F - 1		
Q103	F - 1		
Q104	G - 2		
Q105	F - 3		
Q106	G - 3		
Q107	F - 4		
Q108	F - 2		
Q109	F - 2		
Q201	C - 7		
Q202	C - 6		
Q203	C - 6		
Q204	C - 6		
Q205	C - 6		
Q206	C - 4		
Q207	C - 5		
Q208	C - 5		
Q209	C - 5		
Q210	D - 5		
Q301	G - 8		

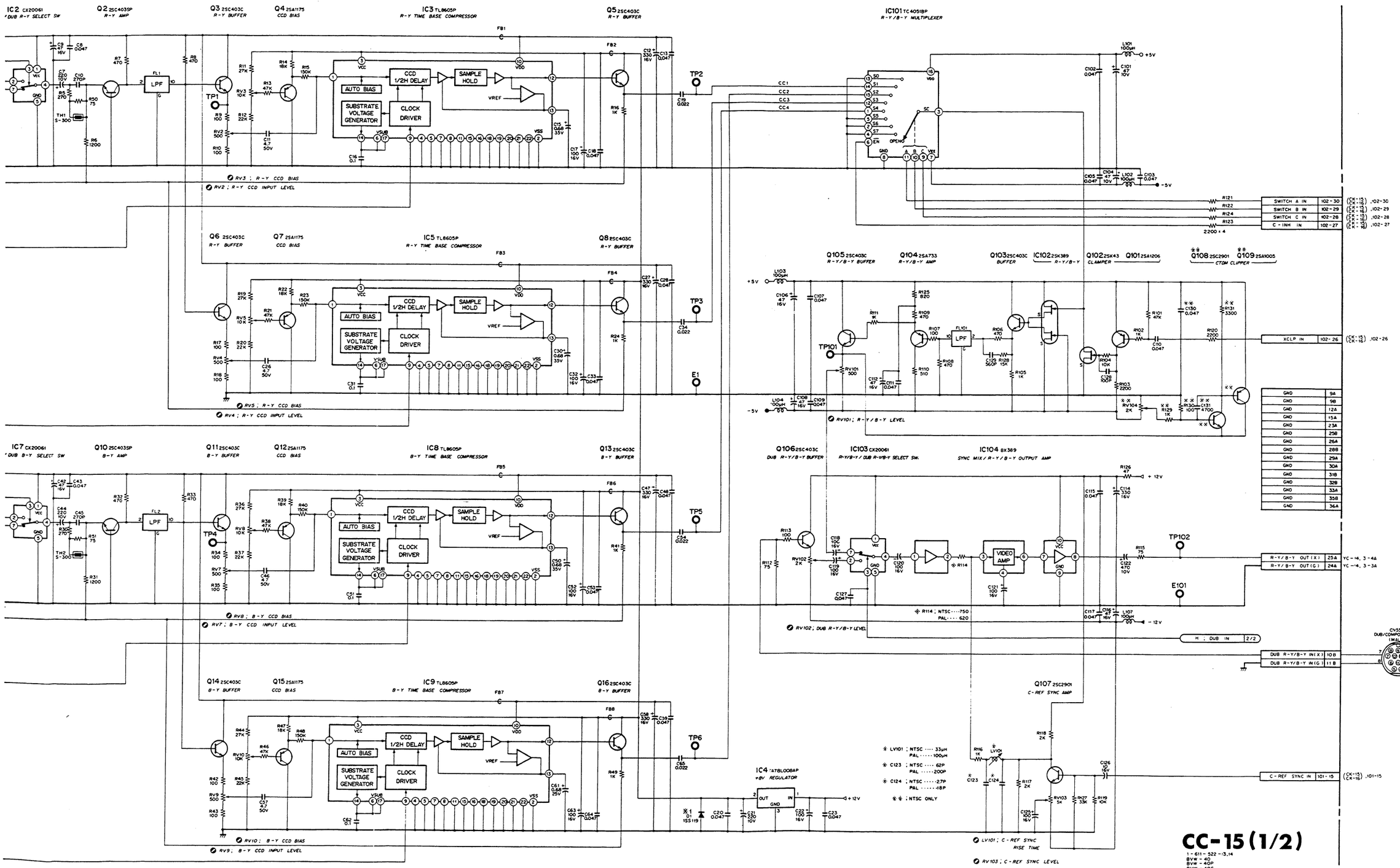
CC-15 (1/2) (CHROMA TIME DIVISION MULTIPLEXER)



NOTE:

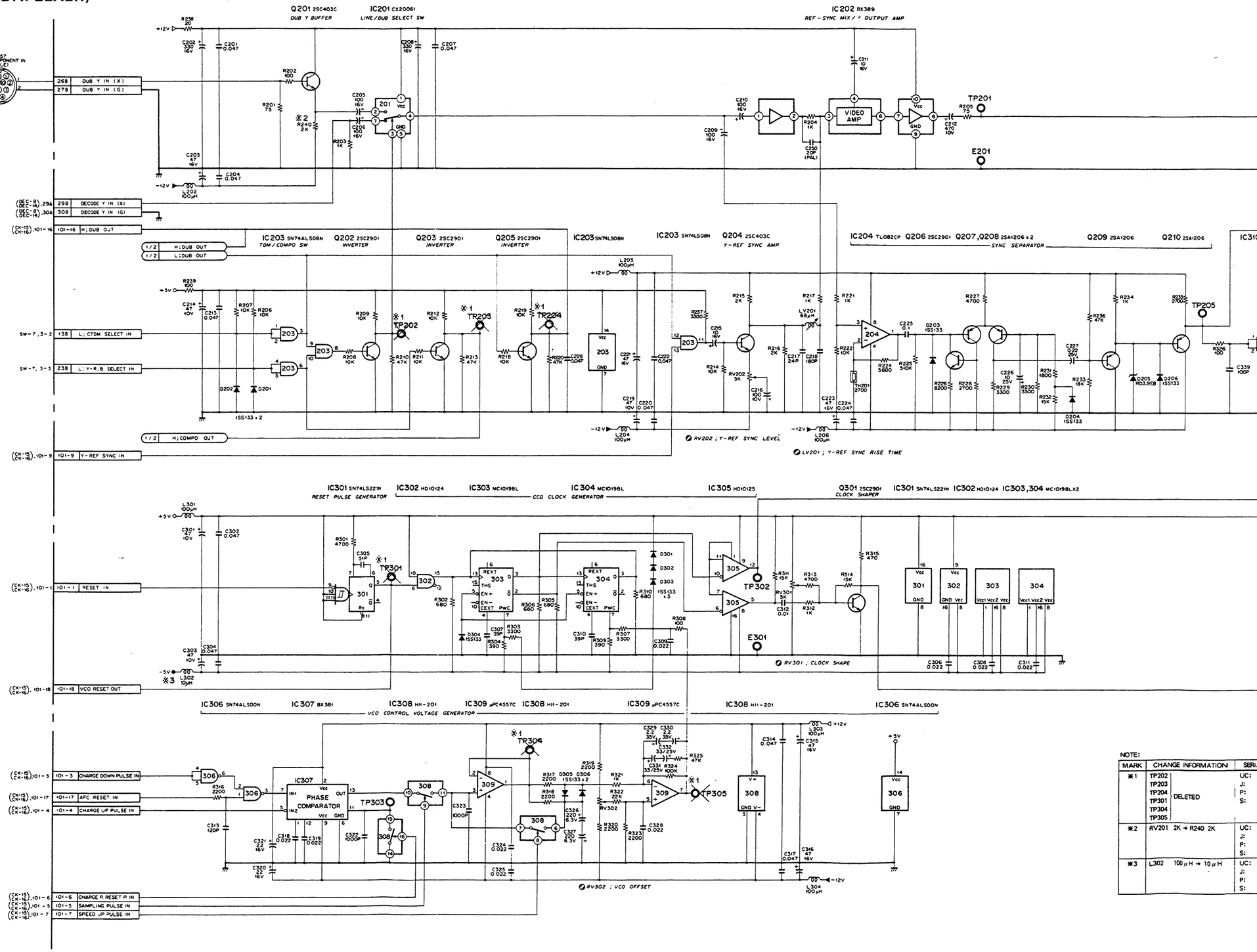
MARK	CHANGE INFORMATION	SERIAL NO.
※1	D1 1SS119 ADDED	UC: 11229 ~ J: 10626 ~ P: 11041 ~ S: 10026 ~
※2	RV1 1K → R52 1K RV6 1K → R53 1K	UC: 11719 ~ J: 10806 ~ P: 11041 ~ S: 10036 ~

CC-15 (1/2)
CC-15 (1/2)



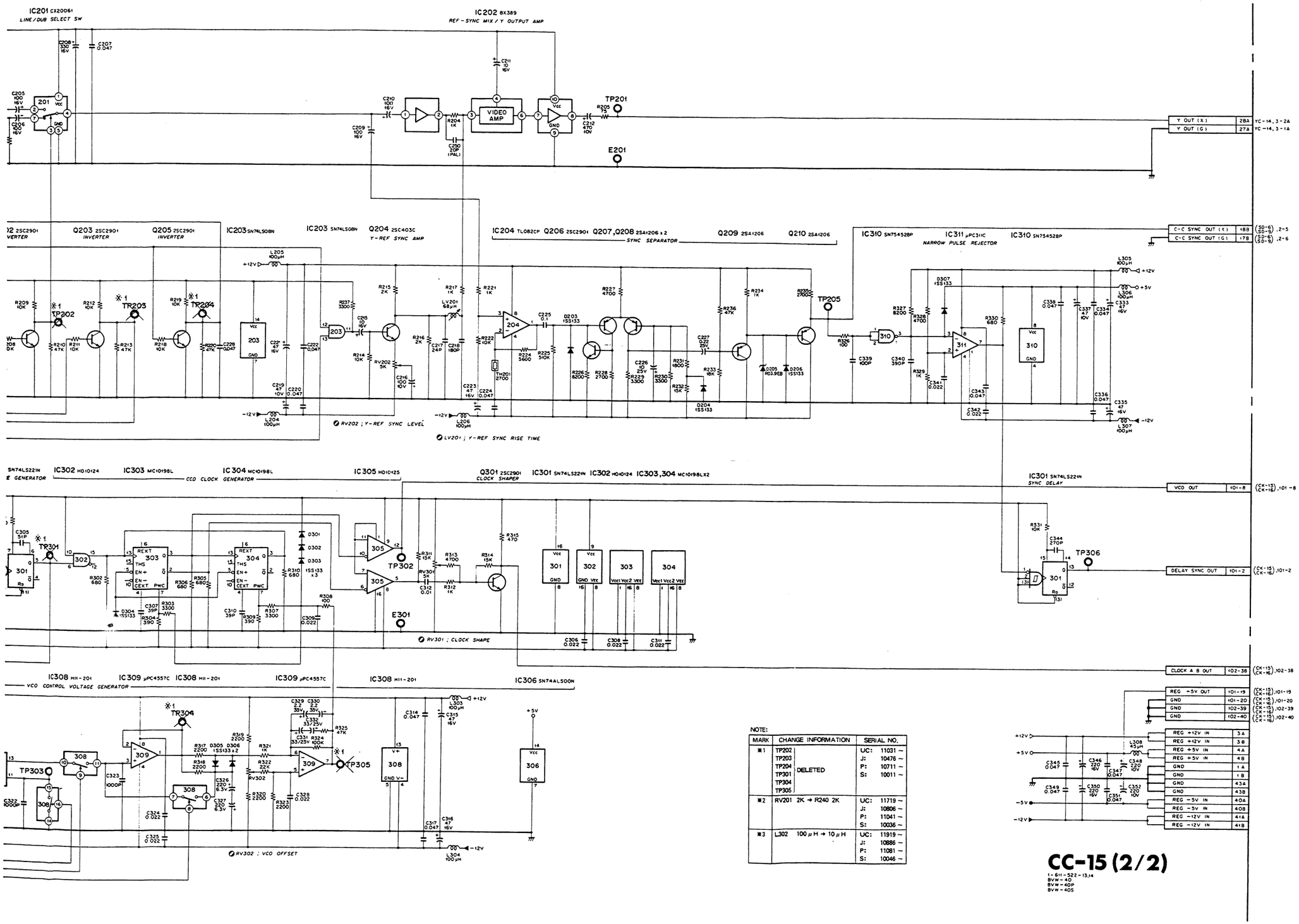
CC-15 (2/2) CC-15 (2/2)

CC-15 (2/2) (CHROMA TIME DIVISION MULTIPLEXER)



NOTE:

MARK	CHANGE INFORMATION		SER.
※1	TP202 TP203 TP204 TP301 TP304 TP305	DELETED	UC: J: P: S:
※2	RV201 2K → R240 2K		UC: J: P: S:
※3	L302 100μH → 10μH		UC: J: P: S:



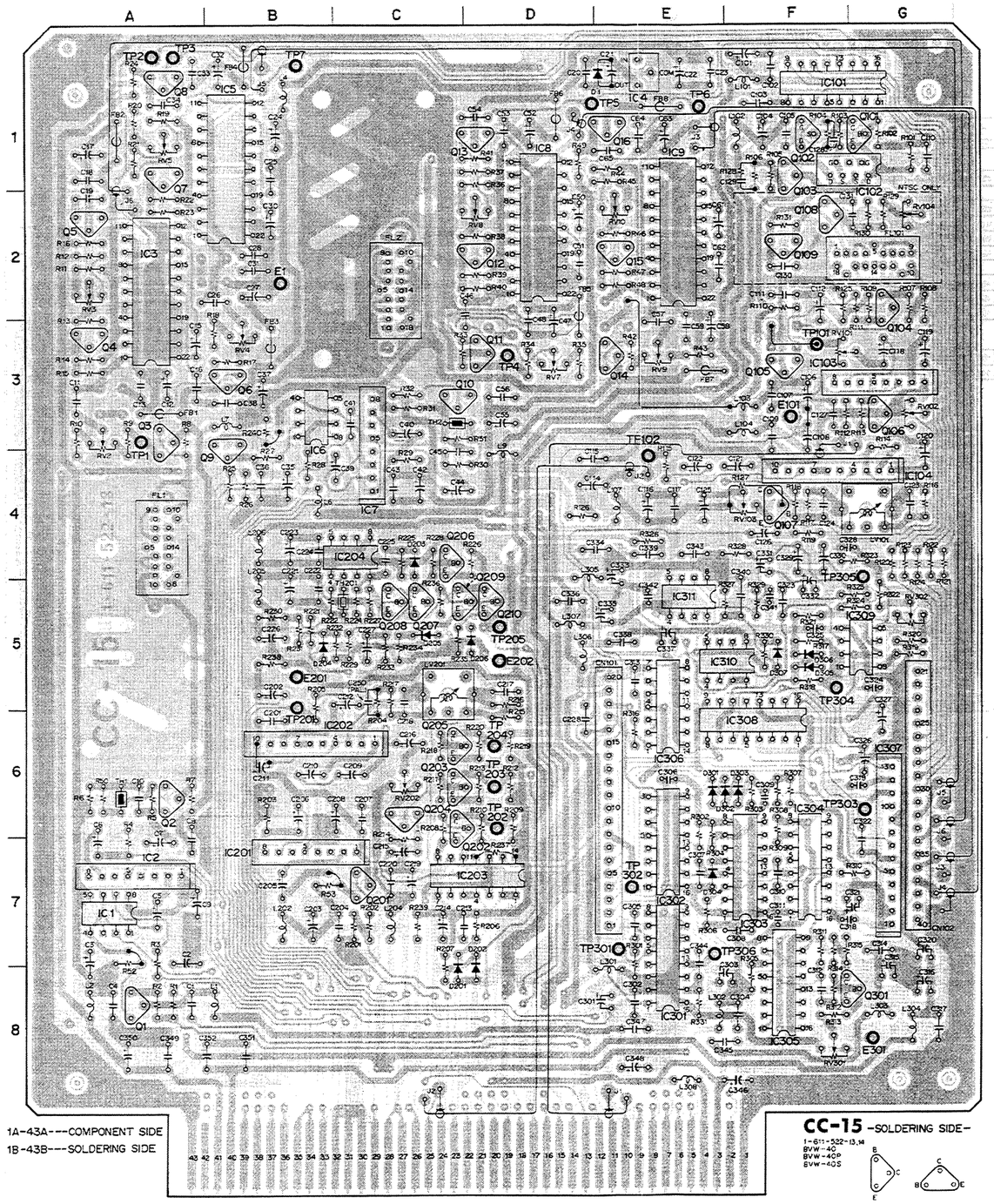
NOTE:

MARK	CHANGE INFORMATION		SERIAL NO.
※1	TP202 TP203 TP204 TP301 TP304 TP305	DELETED	UC: 11031 ~ J: 10476 ~ P: 10711 ~ S: 10011 ~
※2	RV201 2K → R240 2K		UC: 11719 ~ J: 10806 ~ P: 11041 ~ S: 10036 ~
※3	L302 100μH → 10μH		UC: 11919 ~ J: 10886 ~ P: 11081 ~ S: 10046 ~

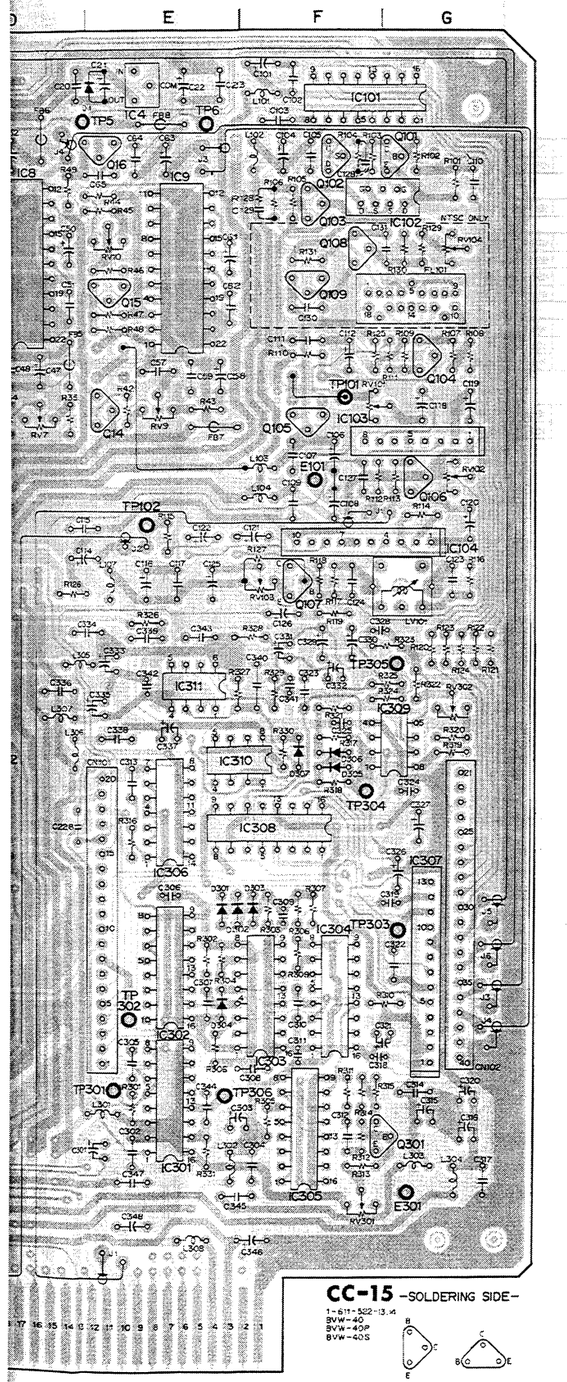
CC-15 (2/2)

1-611-522-13,14
BVW-40
BVW-40P
BVW-40S

CC-15 (CHROMA TIME DIVISION MULTIPLEXER)



CN101	E - 6	RV2	A - 3		
CN102	G - 7	RV3	A - 2		
		RV4	B - 3		
D1	E - 1	RV5	A - 1		
D201	C - 8	RV7	D - 3		
D202	D - 8	RV8	D - 2		
D203	C - 4	RV9	E - 3		
D204	B - 5	RV10	E - 2		
D205	C - 5	RV101	F - 3		
D206	D - 5	RV102	G - 3		
D301	E - 6	RV103	F - 4		
D302	E - 6	RV104	G - 2		
D303	F - 6	RV202	C - 6		
D304	E - 7	RV301	F - 8		
D305	F - 5	RV302	G - 5		
D306	F - 5				
D307	F - 5	TH1	A - 6		
		TH2	C - 3		
E1	B - 2	TH201	C - 3		
E101	F - 3				
E201	B - 5	TP1	A - 3		
E202	D - 5	TP2	A - 1		
E301	G - 8	TP3	A - 1		
		TP4	D - 3		
FL1	A - 4	TP5	D - 1		
FL2	C - 2	TP6	E - 1		
FL101	G - 2	TP7	B - 1		
		TP101	F - 3		
IC1	A - 7	TP102	E - 4		
IC2	A - 7	TP201	B - 5		
IC3	A - 3	TP202	D - 6		
IC4	B - 1	TP203	D - 6		
IC5	B - 1	TP204	D - 6		
IC6	B - 3	TP205	D - 5		
IC7	C - 4	TP301	E - 7		
IC8	D - 2	TP302	E - 7		
IC9	E - 2	TP303	G - 6		
IC101	F - 1	TP304	F - 5		
IC102	G - 1	TP305	G - 5		
IC103	G - 3	TP306	E - 7		
IC104	G - 4				
IC201	B - 7				
IC202	B - 6				
IC203	D - 7				
IC204	C - 4				
IC301	E - 8				
IC302	E - 7				
IC303	F - 7				
IC304	F - 7				
IC305	F - 8				
IC306	E - 6				
IC307	G - 5				
IC308	F - 6				
IC309	G - 5				
IC310	E - 5				
IC311	E - 5				
LV101	G - 4				
LV201	C - 5				
Q1	A - 8				
Q2	A - 6				
Q3	A - 3				
Q4	A - 3				
Q5	A - 2				
Q6	B - 3				
Q7	A - 1				
Q8	A - 1				
Q9	B - 4				
Q10	C - 3				
Q11	D - 3				
Q12	D - 2				
Q13	D - 1				
Q14	E - 3				
Q15	E - 2				
Q16	E - 1				
Q101	G - 1				
Q102	F - 1				
Q103	F - 1				
Q104	G - 2				
Q105	F - 2				
Q106	G - 3				
Q107	F - 4				
Q108	F - 2				
Q109	F - 2				
Q201	C - 7				
Q202	C - 6				
Q203	C - 6				
Q204	C - 6				
Q205	C - 6				
Q206	C - 4				
Q207	C - 5				
Q208	C - 5				
Q209	C - 5				
Q210	D - 5				
Q301	G - 8				



CN101 E - 6
CN102 G - 7

D1 E - 1
D201 C - 8
D202 D - 8
D203 C - 4
D204 B - 5
D205 C - 5
D206 D - 5
D301 E - 6
D302 E - 6
D303 F - 6
D304 E - 7
D305 F - 5
D306 F - 5
D307 F - 5

E1 B - 2
E101 F - 3
E201 B - 5
E202 D - 5
E301 G - 8

FL1 A - 4
FL2 C - 2
FL101 G - 2

IC1 A - 7
IC2 A - 7
IC3 A - 2
IC4 E - 1
IC5 B - 1
IC6 B - 3
IC7 C - 4
IC8 D - 2
IC9 E - 2
IC101 F - 1
IC102 G - 1
IC103 G - 3
IC104 G - 4
IC201 B - 7
IC202 B - 6
IC203 D - 7
IC204 C - 4
IC301 B - 8
IC302 B - 7
IC303 F - 7
IC304 F - 7
IC305 F - 8
IC306 E - 6
IC307 G - 6
IC308 F - 6
IC309 G - 5
IC310 E - 5
IC311 E - 5

LV101 G - 4
LV201 C - 5

Q1 A - 8
Q2 A - 6
Q3 A - 3
Q4 A - 3
Q5 A - 2
Q6 B - 3
Q7 A - 1
Q8 A - 1
Q9 B - 1
Q10 C - 3
Q11 D - 3
Q12 D - 2
Q13 D - 1
Q14 E - 3
Q15 E - 2
Q16 E - 1
Q101 G - 1
Q102 F - 1
Q103 F - 1
Q104 G - 2
Q105 F - 3
Q106 G - 3
Q107 F - 4
Q108 F - 2
Q109 F - 2
Q201 C - 7
Q202 C - 6
Q203 C - 6
Q204 C - 6
Q205 C - 6
Q206 C - 4
Q207 C - 5
Q208 C - 5
Q209 C - 5
Q210 D - 5
Q301 G - 8

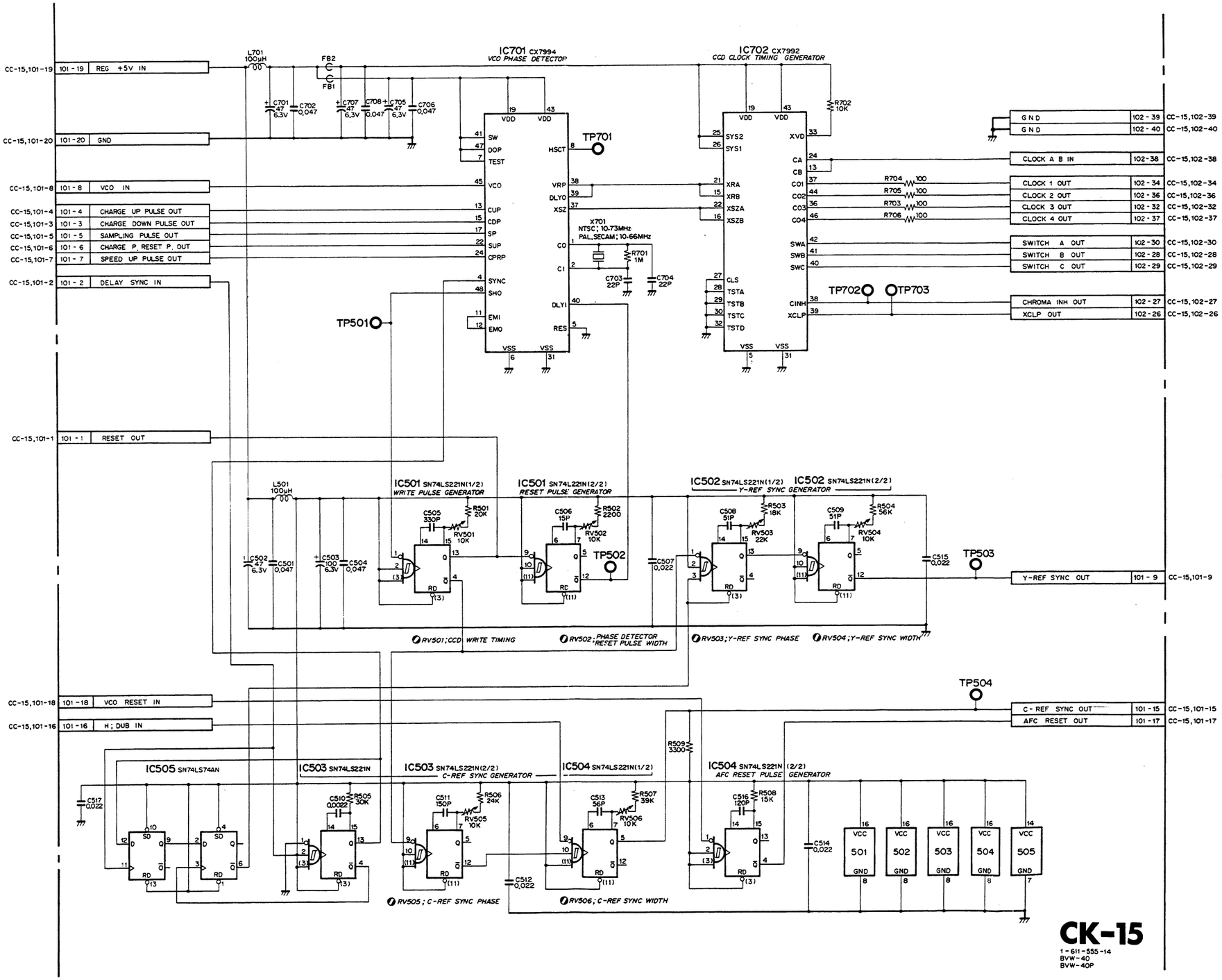
RV2 A - 3
RV3 A - 2
RV4 B - 3
RV5 A - 1
RV7 D - 3
RV8 D - 2
RV9 E - 3
RV10 E - 2
RV101 F - 3
RV102 G - 3
RV103 F - 4
RV104 G - 2
RV202 C - 6
RV301 F - 8
RV302 G - 5

TH1 A - 6
TH2 C - 3
TH201 C - 5

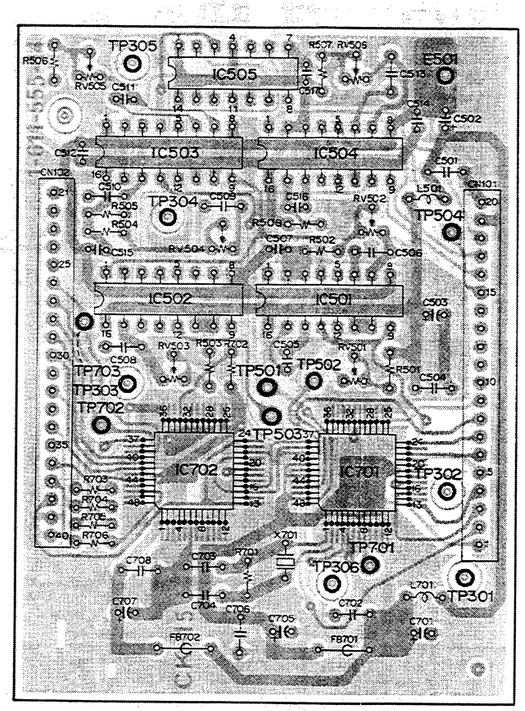
TP1 A - 3
TP2 A - 1
TP3 A - 1
TP4 D - 3
TP5 D - 1
TP6 E - 1
TP7 B - 1
TP101 F - 3
TP102 E - 4
TP201 B - 5
TP202 D - 6
TP203 D - 6
TP204 D - 6
TP205 D - 5
TP301 E - 7
TP302 E - 7
TP303 G - 6
TP304 F - 5
TP305 G - 5
TP306 E - 7

CK-15

CK-15 (CCD CLOCK TIMING GENERATOR) UP TO S/N 10710



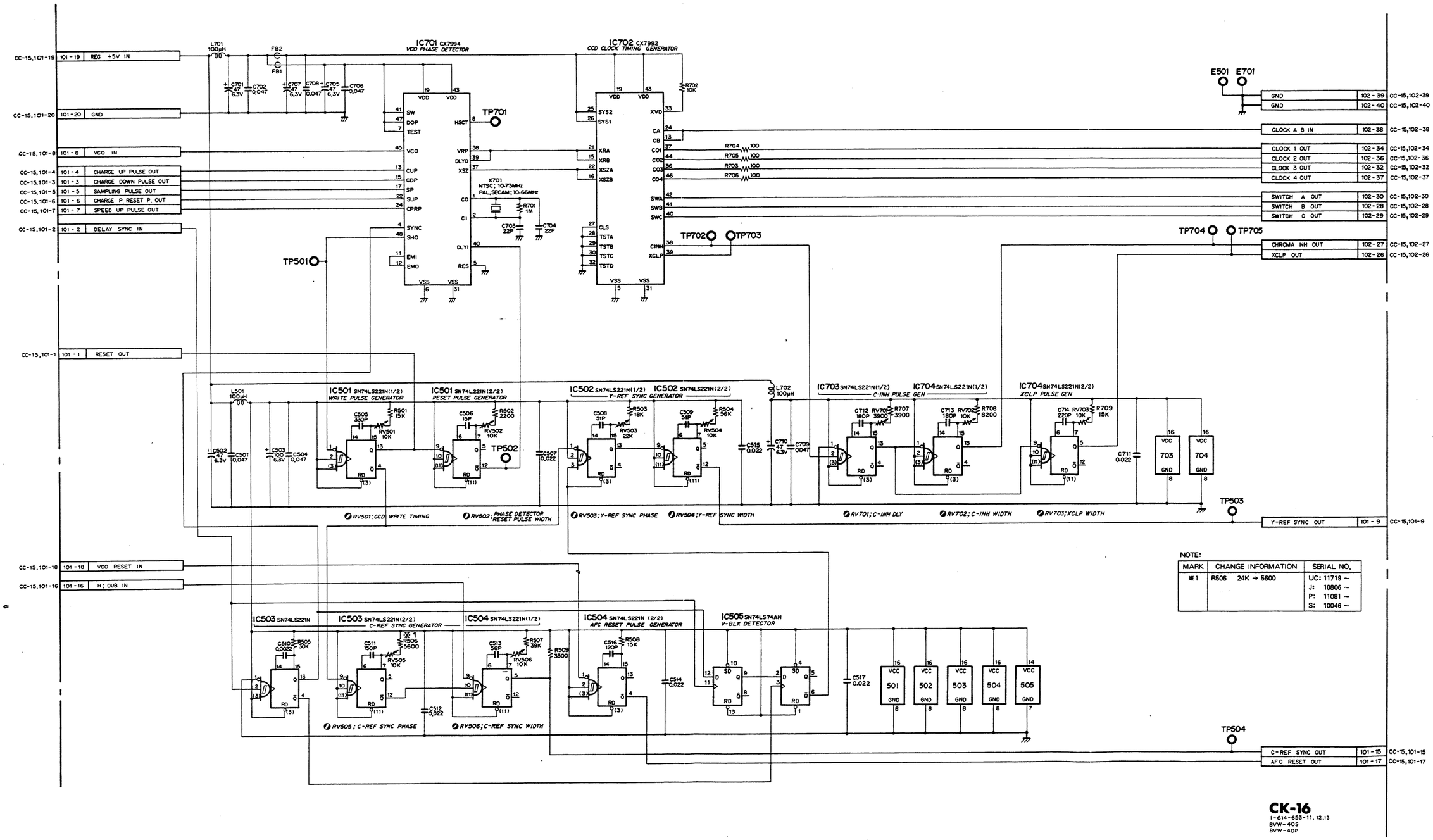
CK-15
1-611-555-14
BVW-40
BVW-40P



CK-15 -SOLDERING SIDE-

1-611-555-14
8VW-40
9VW-40P

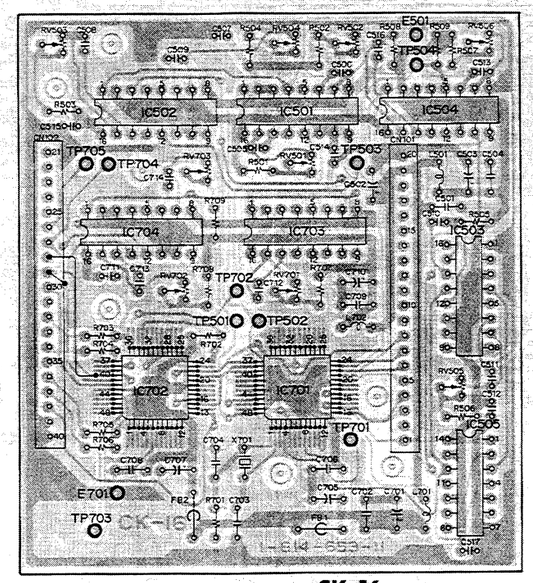
CK-16 (CCD CLOCK TIMING GENERATOR) S/N 10711 AND LATER



NOTE:

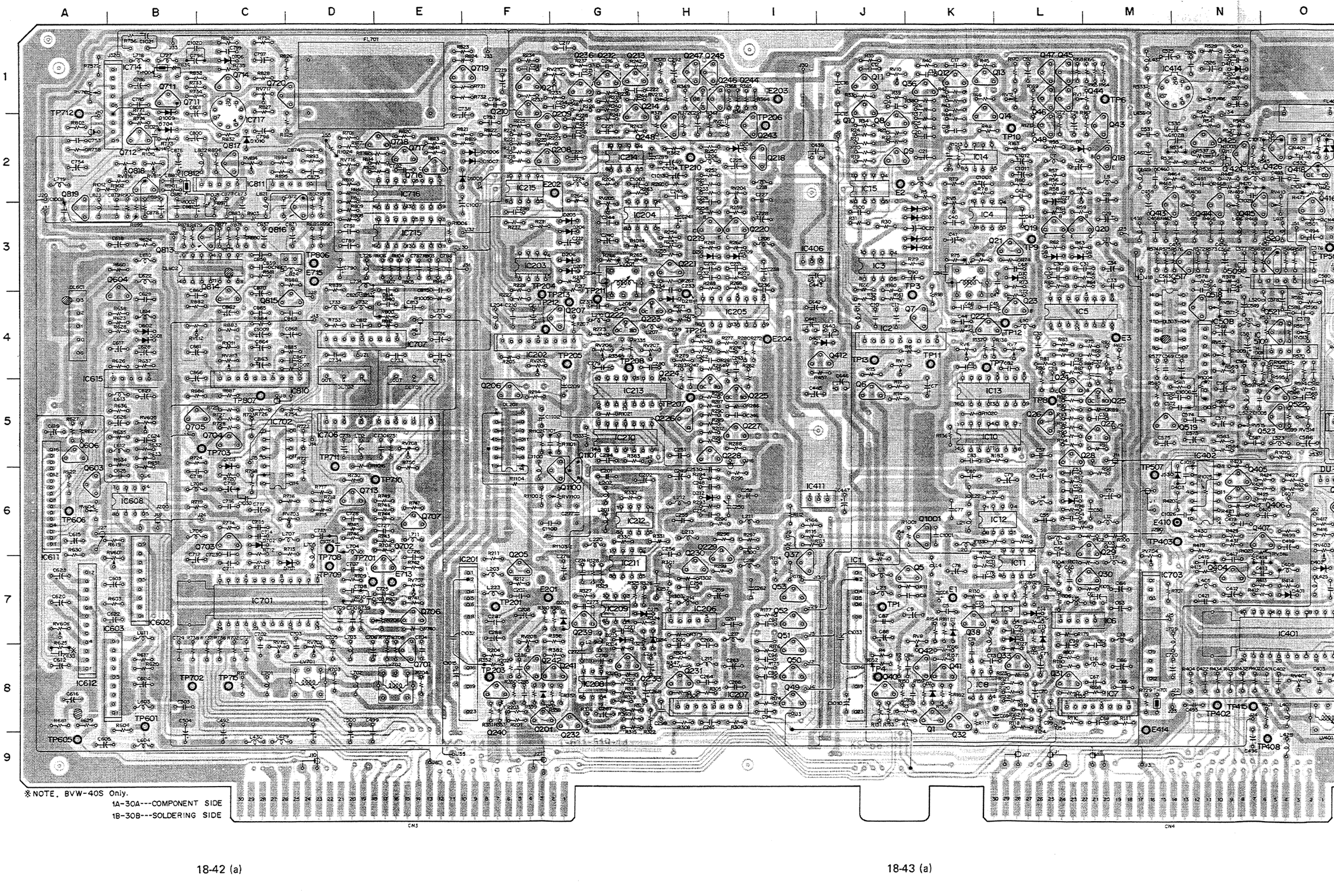
MARK	CHANGE INFORMATION	SERIAL NO.
※1	R506 24K → 5600	UC: 11719 ~ J: 10806 ~ P: 11081 ~ S: 10046 ~

CK-16
1-614-653-11, 12, 13
BVW-40S
BVW-40P



CK-16–SOLDERING SIDE–
1-614-653-11, 12,13
BVW-405
BVW-40P

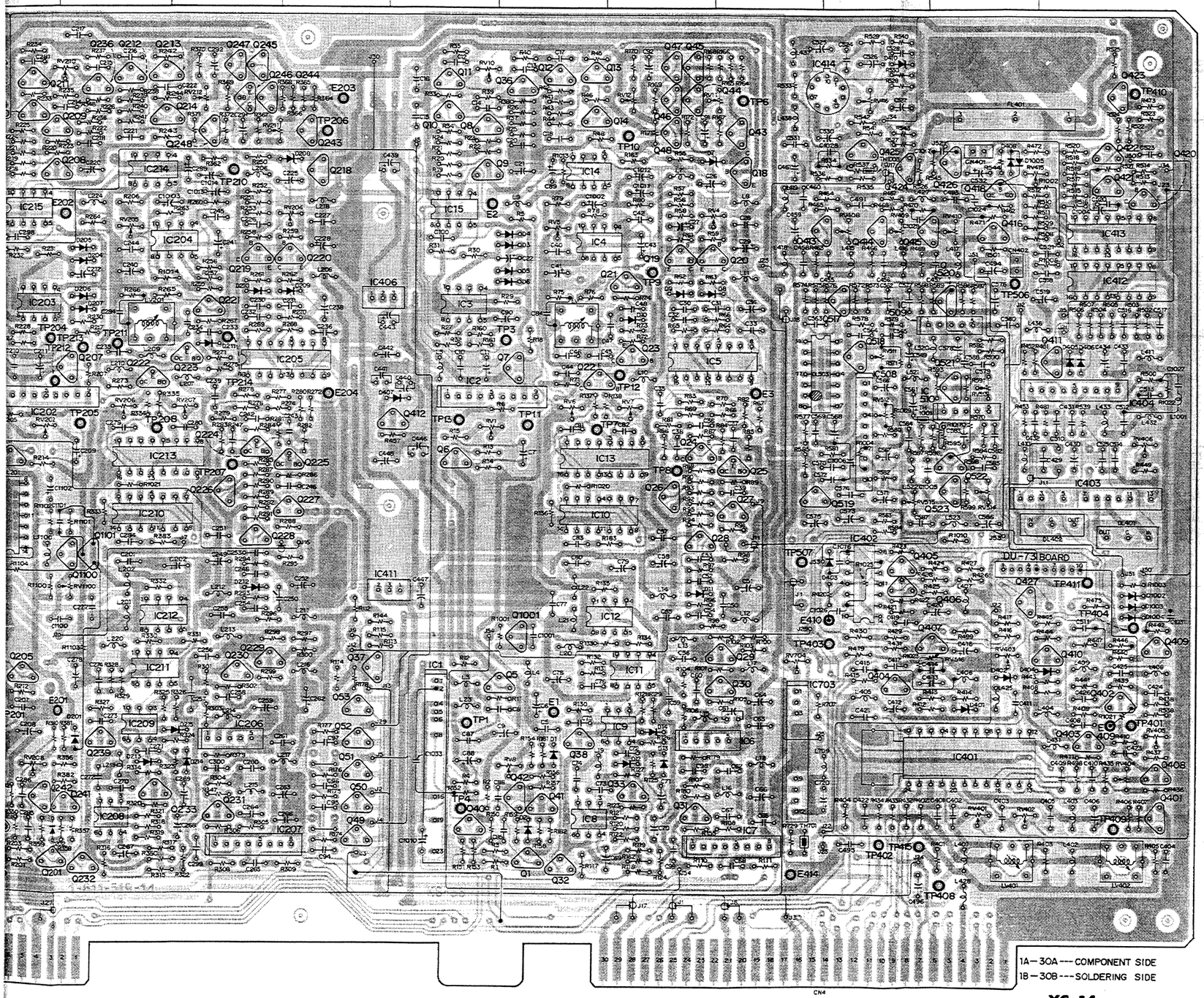
YC-14 (Y/C MODULATOR AND DEMODULATOR) UP TO S/N 10390



※NOTE. BVW-40S Only.
1A-30A---COMPONENT SIDE
1B-30B---SOLDERING SIDE

18-42 (a)

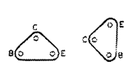
18-43 (a)



YC-14 —SOLDERING SIDE—
1-611-519-14
BVW-40P
BVW-40S

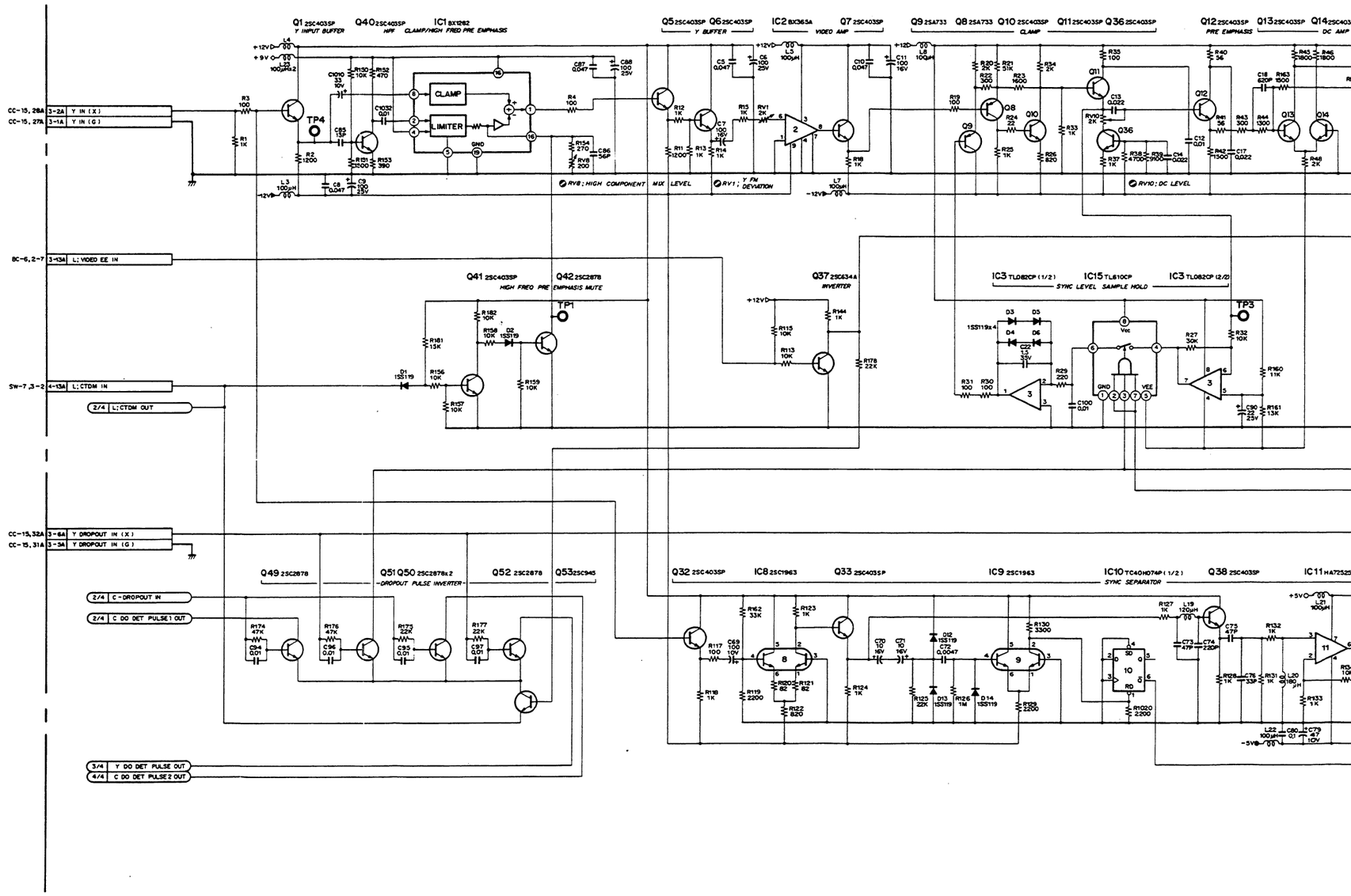
18-43 (a)

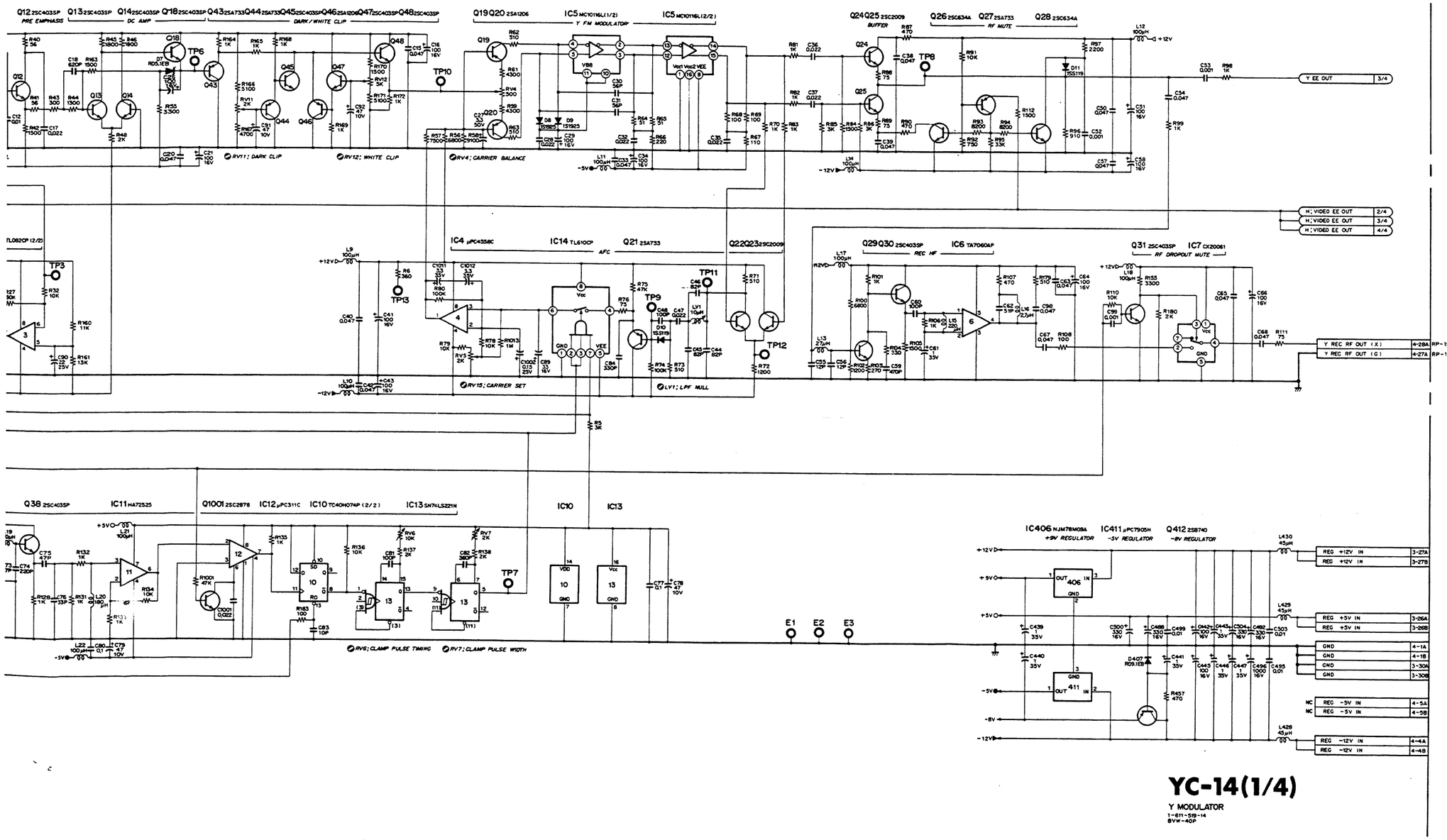
CN3	E - 9	IC1	J - 7	Q23	L - 4	Q421	P - 2	RV702	D - 8		
CN4	M - 9	IC2	J - 4	Q24	L - 5	Q422	P - 2	RV703	D - 6		
CN401	O - 2	IC3	J - 3	Q25	M - 5	Q423	P - 1	RV704	M - 7		
CN402	O - 3	IC4	K - 3	Q26	L - 5	Q424	N - 2	RV706	E - 7		
CN801	D - 3	IC5	M - 4	Q27	M - 5	Q425	N - 2	RV707	E - 7		
		IC6	M - 7	Q28	L - 5	Q426	O - 2	RV708	E - 5		
D1	K - 7	IC7	M - 8	Q29	M - 6	Q427	O - 6	RV716	D - 2		
D2	K - 8	IC8	F - 8	Q30	M - 7	Q517	N - 3	RV717	C - 1		
D3	K - 3	IC9	L - 7	Q31	L - 8	Q518	N - 4	RV718	A - 1		
D4	K - 3	IC10	K - 5	Q32	K - 8	Q519	M - 5	RV812	B - 4		
D5	K - 3	IC11	L - 7	Q33	L - 8	Q520	O - 3	RV813	C - 1		
D6	K - 3	IC12	L - 6	Q34	K - 1	Q521	O - 4	RV814	C - 2		
D7	L - 2	IC13	K - 5	Q35	I - 7	Q522	O - 5	RV815	B - 2		
D8	L - 3	IC14	K - 2	Q36	K - 7	Q523	O - 5	RV816	B - 2		
D9	L - 3	IC15	J - 2	Q37	J - 8	Q603	A - 6	RV1100	G - 6		
D10	L - 3	IC201	F - 7	Q38	K - 8	Q604	B - 4				
D11	L - 6	IC202	F - 4	Q39	K - 8	Q605	A - 5	TH701	M - 8		
D12	L - 7	IC203	F - 3	Q40	M - 2	Q701	E - 8	TH1001	N - 4		
D13	L - 7	IC204	H - 3	Q41	L - 1	Q702	E - 7	TH1002	B - 2		
D14	L - 7	IC205	H - 4	Q42	L - 1	Q703	C - 6	TH1003	N - 2		
D201	G - 7	IC206	H - 7	Q46	L - 1	Q704	C - 5	TH1004	B - 1		
D202	F - 8	IC207	H - 8	Q47	L - 1	Q705	C - 5				
D204	G - 3	IC208	G - 8	Q48	L - 2	Q706	E - 7	TP1	J - 7		
D205	G - 3	IC209	G - 7	Q49	I - 8	Q707	E - 6	TP3	K - 4		
D206	G - 3	IC210	G - 5	Q50	I - 8	Q711	B - 1	TP4	J - 8		
D207	G - 3	IC211	G - 7	Q51	I - 8	Q712	B - 2	TP6	M - 1		
D208	I - 2	IC212	G - 6	Q52	I - 7	Q713	D - 6	TP7	K - 1		
D209	I - 3	IC213	G - 5	Q53	I - 8	Q714	C - 1	TP8	L - 5		
D210	H - 3	IC214	G - 2	Q201	F - 8	Q716	E - 2	TP9	L - 3		
D211	H - 4	IC215	F - 2	Q205	F - 7	Q717	E - 2	TP10	L - 2		
D212	H - 6	IC401	O - 7	Q206	F - 5	Q718	E - 2	TP11	K - 1		
D213	G - 7	IC402	N - 6	Q207	G - 4	Q719	F - 1	TP12	L - 4		
D214	H - 7	IC403	P - 5	Q208	F - 2	Q720	D - 1	TP13	J - 4		
D215	H - 7	IC404	P - 4	Q209	F - 2	Q813	C - 3	TP201	F - 7		
D401	O - 7	IC406	I - 3	Q210	F - 1	Q814	C - 4	TP203	F - 8		
D402	O - 7	IC411	J - 6	Q211	F - 1	Q815	D - 4	TP204	F - 4		
D403	N - 6	IC412	P - 3	Q212	G - 1	Q816	D - 5	TP205	G - 4		
D404	P - 7	IC413	P - 3	Q213	G - 1	Q817	C - 2	TP206	I - 2		
D405	P - 4	IC414	N - 1	Q214	G - 2	Q818	B - 2	TP207	H - 5		
D406	P - 4	IC508	N - 4	Q215	I - 2	Q819	A - 3	TP208	G - 4		
D407	J - 4	IC509	O - 3	Q219	H - 3	Q1001	K - 6	TP210	H - 2		
D408	O - 2	IC510	O - 4	Q220	I - 3	Q1100	G - 6	TP211	G - 4		
D410	N - 1	IC602	B - 7	Q221	H - 3	Q1101	G - 6	TP212	F - 4		
D601	B - 4	IC603	B - 8	Q223	G - 4			TP213	G - 4		
D602	B - 4	IC606	B - 6	Q224	H - 4	RV1	J - 4	TP214	H - 4		
D701	D - 7	IC611	A - 6	Q225	H - 5	RV4	L - 2	TP401	F - 7		
D702	C - 6	IC612	A - 7	Q226	I - 5	RV5	K - 3	TP402	N - 8		
D703	C - 6	IC615	B - 5	Q227	I - 5	RV6	K - 4	TP403	N - 6		
D704	B - 2	IC701	C - 7	Q228	H - 5	RV8	K - 7	TP404	P - 6		
D706	C - 1	IC702	C - 5	Q229	H - 5	RV11	M - 1	TP405	O - 9		
D1002	P - 6	IC703	M - 7	Q230	H - 7	RV12	L - 1	TP406	P - 8		
D1003	P - 6	IC706	D - 5	Q231	H - 8	RV202	F - 4	TP410	P - 1		
D1004	P - 6	IC707	D - 4	Q232	G - 8	RV204	I - 2	TP411	P - 6		
D1005	O - 2	IC714	B - 1	Q233	G - 8	RV205	G - 3	TP415	N - 8		
D1006	F - 2	IC715	E - 3	Q234	G - 1	RV206	G - 4	TP506	O - 3		
D1007	F - 2	IC716	E - 2	Q236	G - 7	RV207	H - 4	TP507	M - 6		
D1008	F - 2	IC717	C - 2	Q239	G - 7	RV208	F - 8	TP601	B - 8		
D1009	B - 1	IC810	C - 5	Q240	F - 8	RV209	F - 7	TP605	A - 9		
D1010	C - 2	IC811	D - 2	Q241	G - 8	RV210	G - 1	TP606	A - 6		
		IC812	C - 2	Q242	I - 2	RV211	H - 2	TP701	D - 7		
DL201	F - 5			Q243	H - 1	RV212	H - 1	TP702	B - 8		
DL401	P - 5	LV1	K - 3	Q244	H - 1	RV401	O - 8	TP703	C - 5		
DL402	P - 5	LV201	G - 3	Q245	H - 1	RV402	O - 8	TP706	D - 6		
DL503	M - 4	LV401	O - 8	Q246	H - 1	RV403	O - 6	TP709	D - 7		
DL601	A - 4	LV402	P - 8	Q247	H - 1	RV404	P - 8	TP710	E - 6		
DL701	E - 5	LV701	D - 8	Q248	H - 2	RV405	P - 8	TP711	D - 5		
DL702	D - 5	LV702	E - 8	Q401	P - 8	RV406	P - 7	TP712	A - 1		
DL802	C - 3			Q402	P - 7	RV408	P - 4	TP715	C - 8		
		Q1	K - 8	Q403	P - 7	RV409	N - 3	TP806	D - 3		
E1	K - 7	Q5	K - 7	Q404	N - 7	RV410	O - 3	TP807	C - 5		
E2	J - 2	Q6	J - 5	Q405	N - 6	RV415	O - 2				
E3	M - 4	Q7	K - 4	Q406	N - 6	RV416	N - 1				
E201	F - 7	Q8	J - 2	Q407	O - 6	RV511	N - 4				
E202	G - 2	Q9	J - 2	Q408	P - 8	RV512	N - 4				
E203	I - 1	Q10	J - 1	Q409	P - 6	RV513	O - 4				
E204	I - 1	Q11	J - 1	Q410	P - 6	RV514	O - 5				
E406	P - 7	Q12	K - 1	Q411	P - 4	RV515	N - 5				
E410	N - 6	Q13	K - 1	Q412	J - 4	RV516	O - 6				
E414	M - 8	Q14	K - 2	Q413	M - 3	RV601	B - 7				
E713	E - 7	Q18	M - 2	Q414	N - 3	RV604	A - 6				
E715	D - 3	Q19	L - 3	Q415	N - 3	RV605	B - 5				
		Q20	L - 3	Q416	O - 3	RV606	A - 7				
FL401	O - 2	Q21	L - 3	Q418	O - 2	RV701	C - 8				
FL701	D - 1	Q22	K - 4	Q420	P - 2						



18-44 (a)

YC-14 (1/4) (Y MODULATOR) UP TO S/N 10390



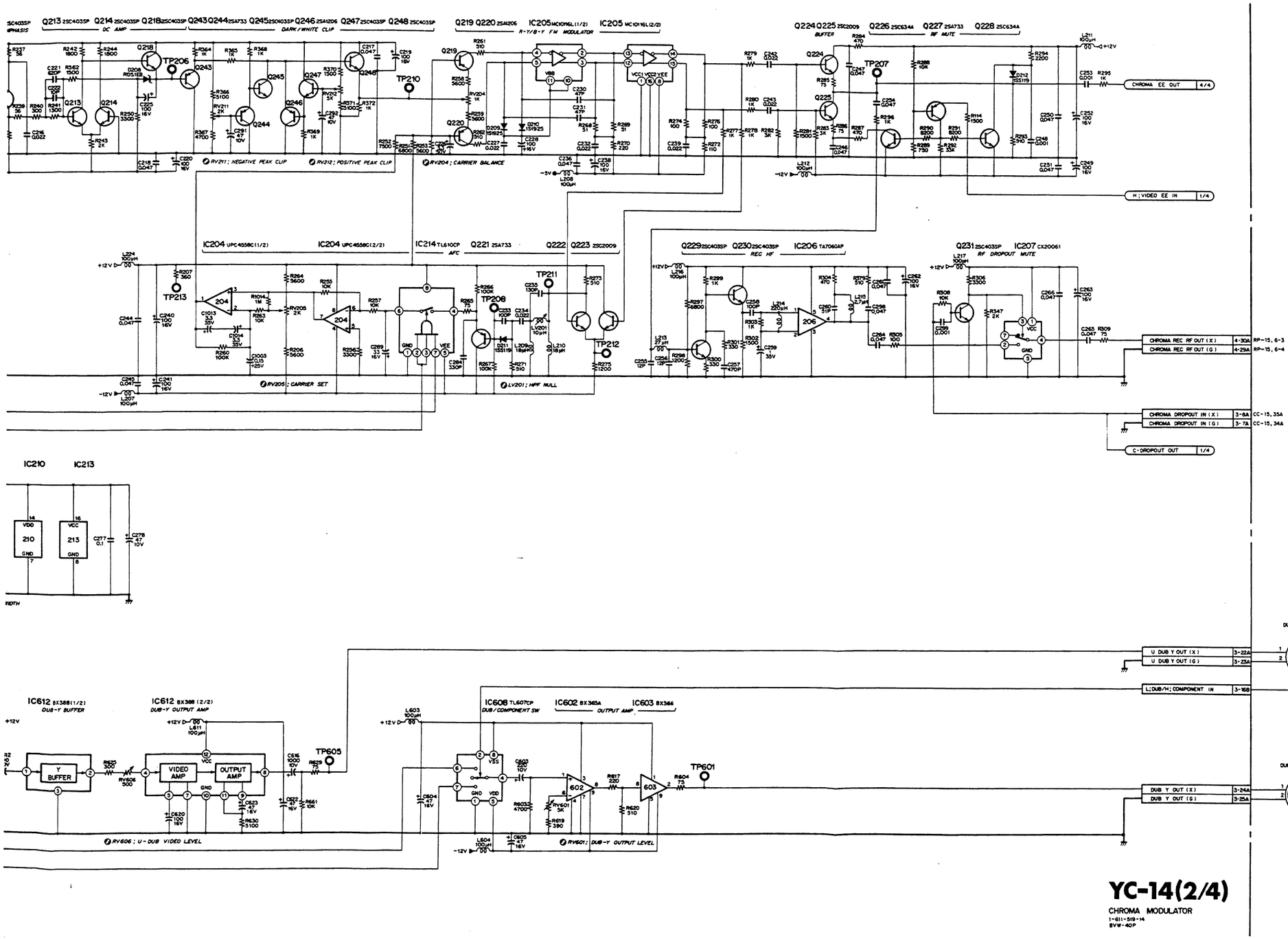


YC-14(1/4)

Y MODULATOR

1-611-519-14
BVW-40P

YC-14 (2/4) (CHROMA MODULATOR) UP TO S/N 10390



YC-14(2/4)

CHROMA MODULATOR

1-611-519-14

BVW-40P

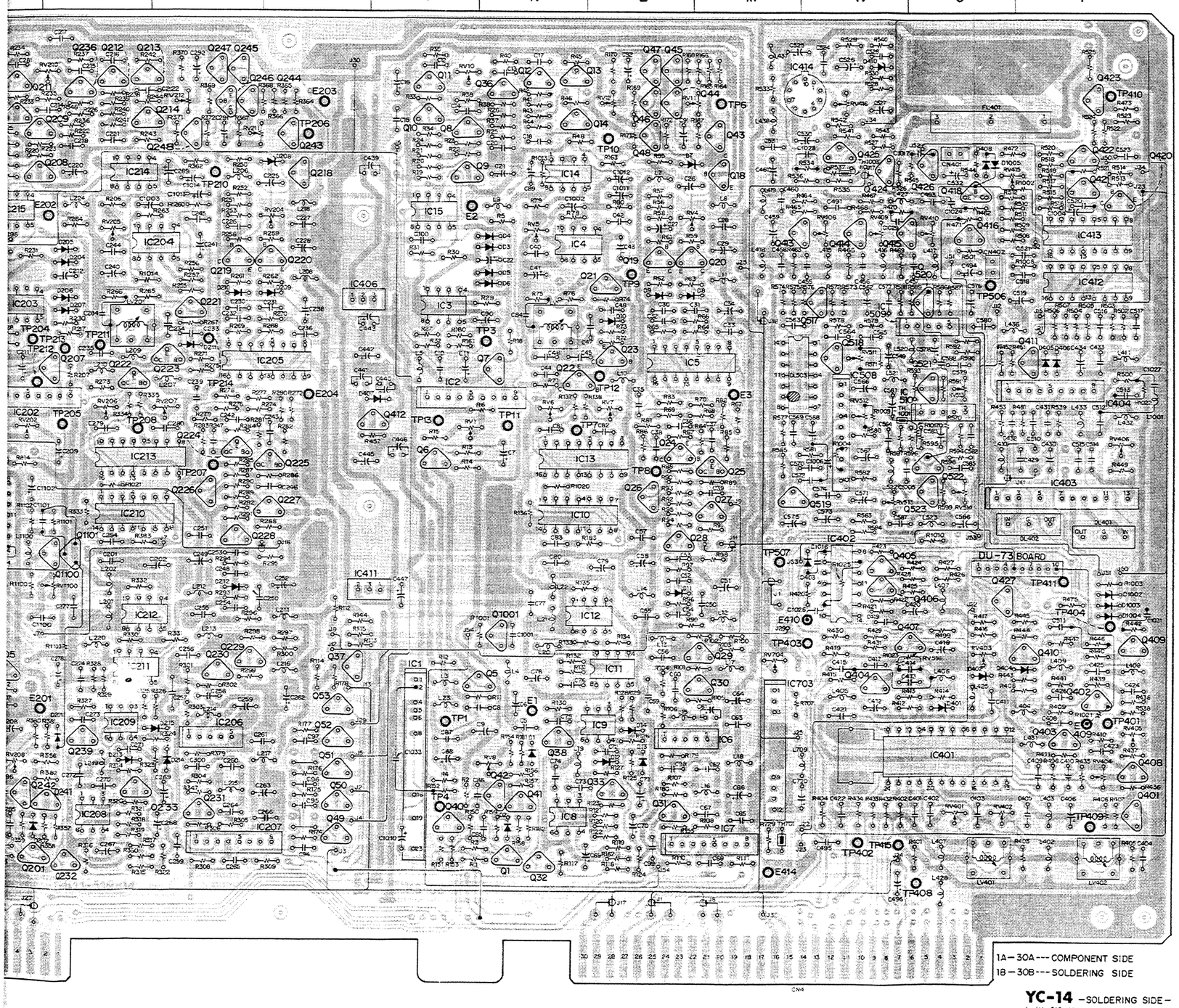
YC-14 (Y/C MODULATOR AND DEMODULATOR) UP TO S/N 10390

※NOTE, BVW-40S Only.
1A-30A---COMPONENT SIDE
1B-30B---SOLDERING SIDE

CN3 CN4

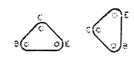
18-53 (a)

18-54 (a)



18-54 (a)

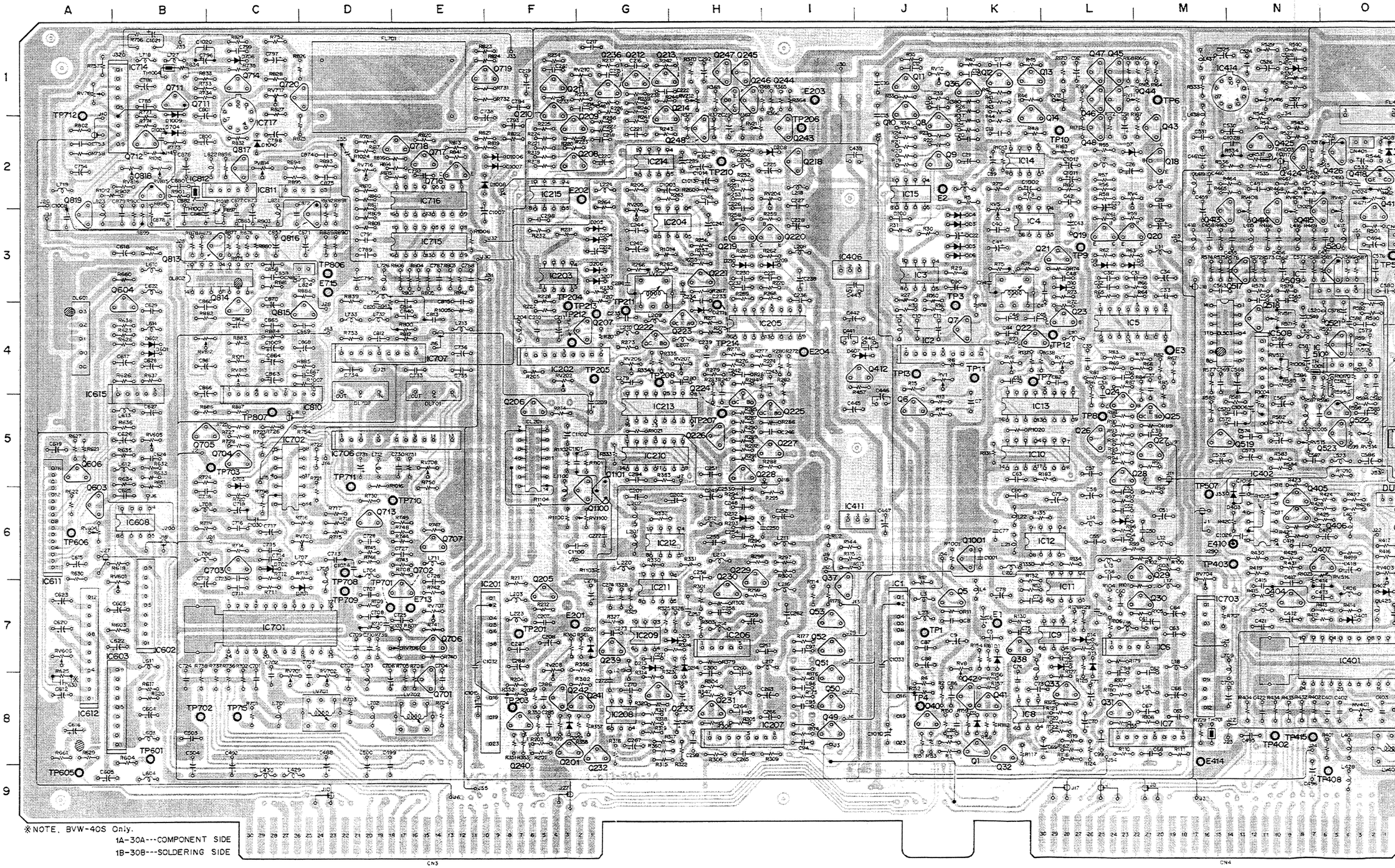
CN3	E - 9	IC1	J - 7	Q23	L - 4	Q121	P - 2	RV702	D - 8
CN4	M - 9	IC2	J - 4	Q24	L - 5	Q122	P - 2	RV703	D - 6
CN401	O - 2	IC3	J - 3	Q25	M - 5	Q123	P - 1	RV704	M - 7
CN402	O - 3	IC4	K - 3	Q26	L - 5	Q124	N - 2	RV706	E - 7
CN801	D - 3	IC5	M - 4	Q27	M - 5	Q125	N - 2	RV707	E - 7
		IC6	M - 7	Q28	L - 5	Q126	O - 2	RV708	E - 5
D1	K - 7	IC7	M - 8	Q29	M - 6	Q127	O - 6	RV716	D - 2
D2	K - 8	IC8	K - 8	Q30	M - 7	Q517	N - 3	RV717	C - 1
D3	K - 3	IC9	L - 7	Q31	L - 8	Q518	N - 4	RV718	A - 1
D4	K - 3	IC10	K - 5	Q32	K - 8	Q519	M - 5	RV812	B - 4
D5	K - 3	IC11	L - 7	Q33	L - 8	Q520	O - 3	RV813	C - 4
D6	K - 3	IC12	L - 6	Q34	M - 1	Q521	O - 4	RV814	C - 2
D7	L - 2	IC13	K - 5	Q35	I - 7	Q522	O - 5	RV815	B - 2
D8	L - 3	IC14	K - 2	Q36	K - 7	Q523	O - 5	RV816	B - 2
D9	L - 3	IC15	J - 2	Q37	J - 8	Q603	A - 6	RV1100	G - 6
D10	L - 3	IC201	F - 7	Q211	K - 8	Q604	B - 4		
D11	L - 6	IC202	F - 4	Q212	K - 8	Q605	A - 5	TH701	M - 8
D12	L - 7	IC203	F - 3	Q213	M - 2	Q701	E - 8	TH1001	N - 4
D13	L - 7	IC204	H - 3	Q214	L - 1	Q702	E - 7	TH1002	B - 2
D14	L - 7	IC205	H - 4	Q215	L - 1	Q703	C - 6	TH1003	N - 2
D201	G - 7	IC206	H - 7	Q216	L - 1	Q704	C - 5	TH1004	B - 1
D202	F - 8	IC207	H - 8	Q217	L - 1	Q705	C - 5		
D204	G - 3	IC208	G - 8	Q218	L - 2	Q706	E - 7	TP1	J - 7
D205	G - 3	IC209	G - 7	Q219	I - 8	Q707	E - 6	TP3	K - 4
D206	G - 3	IC210	G - 5	Q220	I - 8	Q711	B - 1	TP4	J - 8
D207	G - 3	IC211	G - 7	Q651	I - 8	Q712	B - 2	TP6	M - 1
D208	I - 2	IC212	G - 6	Q652	I - 7	Q713	D - 6	TP7	K - 4
D209	I - 3	IC213	G - 5	Q653	I - 7	Q714	C - 1	TP8	L - 5
D210	H - 3	IC214	G - 2	Q801	F - 8	Q715	E - 2	TP9	L - 3
D211	H - 1	IC215	F - 2	Q805	F - 8	Q717	E - 2	TP10	L - 2
D212	H - 6	IC401	O - 7	Q806	F - 5	Q718	C - 5	TP11	K - 1
D213	G - 7	IC402	N - 6	Q807	G - 4	Q719	F - 1	TP12	L - 4
D214	H - 7	IC403	P - 5	Q808	F - 2	Q720	D - 1	TP13	J - 4
D215	H - 7	IC404	P - 4	Q809	F - 2	Q813	C - 3	TP201	F - 7
D401	O - 7	IC406	I - 3	Q810	F - 1	Q814	C - 4	TP203	F - 8
D402	O - 7	IC411	J - 6	Q811	F - 1	Q815	D - 4	TP204	F - 4
D403	N - 6	IC412	P - 3	Q812	G - 1	Q816	D - 3	TP205	G - 4
D404	P - 7	IC413	P - 3	Q813	G - 1	Q817	C - 2	TP206	I - 2
D405	P - 1	IC414	M - 1	Q814	G - 2	Q818	A - 5	TP207	F - 5
D406	P - 1	IC508	N - 4	Q815	I - 2	Q819	A - 3	TP208	G - 4
D407	J - 4	IC509	O - 3	Q816	H - 3	Q1001	K - 6	TP210	H - 2
D408	O - 2	IC510	O - 4	Q820	I - 3	Q1100	G - 6	TP211	G - 4
D410	N - 1	IC602	B - 7	Q821	H - 3	Q1101	G - 6	TP212	F - 4
D601	B - 4	IC603	B - 8	Q822	G - 4			TP213	G - 4
D602	B - 4	IC608	B - 6	Q823	H - 4	RV1	J - 4	TP214	H - 4
D701	D - 7	IC611	A - 6	Q824	H - 5	RV4	L - 2	TP401	P - 7
D702	C - 6	IC612	A - 7	Q825	I - 5	RV5	K - 3	TP402	N - 8
D703	C - 6	IC615	B - 5	Q826	H - 5	RV6	K - 4	TP403	N - 6
D704	B - 2	IC701	C - 7	Q827	I - 5	RV7	L - 4	TP404	P - 6
D706	C - 1	IC702	C - 5	Q828	H - 5	RV8	K - 7	TP408	O - 8
D1002	P - 6	IC705	M - 7	Q829	H - 7	RV10	J - 1	TP409	P - 8
D1003	P - 6	IC706	D - 5	Q830	H - 7	RV11	M - 1	TP410	P - 1
D1004	P - 6	IC707	D - 4	Q831	H - 8	RV12	L - 1	TP411	P - 6
D1005	O - 2	IC714	B - 1	Q832	G - 8	RV202	F - 4	TP415	N - 8
D1006	F - 2	IC715	E - 3	Q833	G - 8	RV204	I - 2	TP506	O - 3
D1007	F - 2	IC716	E - 2	Q836	G - 1	RV205	G - 3	TP507	M - 6
D1008	F - 2	IC717	C - 2	Q839	G - 7	RV206	G - 4	TP601	B - 8
D1009	B - 1	IC810	C - 3	Q840	F - 8	RV207	H - 4	TP605	A - 8
D1010	C - 2	IC811	D - 2	Q841	G - 8	RV208	F - 7	TP606	A - 6
		IC812	C - 2	Q842	F - 8	RV210	G - 1	TP701	D - 7
DL201	F - 5			Q843	I - 2	RV211	H - 2	TP702	B - 8
DL401	P - 5	LV1	K - 2	Q844	H - 1	RV212	H - 1	TP705	C - 5
DL402	P - 5	LV201	G - 3	Q845	H - 1	RV401	O - 8	TP708	D - 6
DL503	M - 4	LV401	O - 8	Q846	H - 1	RV402	O - 8	TP709	D - 7
DL601	A - 4	LV402	P - 8	Q847	H - 1	RV403	O - 6	TP710	E - 6
DL701	E - 5	LV701	D - 8	Q848	H - 2	RV404	P - 5	TP711	D - 5
DL702	D - 5	LV702	E - 8	Q901	P - 8	RV405	P - 7	TP712	A - 1
DL802	C - 3			Q902	P - 7	RV406	P - 4	TP715	C - 8
		Q1	K - 8	Q903	P - 7	RV408	N - 3	TP806	D - 8
E1	K - 7	Q5	K - 7	Q904	N - 7	RV409	N - 3	TP807	C - 5
E2	J - 2	Q6	J - 5	Q905	N - 6	RV410	O - 3		
E3	M - 4	Q7	K - 4	Q906	N - 6	RV415	O - 2		
E201	F - 7	Q8	J - 2	Q907	O - 6	RV416	N - 1		
E202	G - 2	Q9	J - 2	Q908	P - 8	RV511	N - 4		
E203	I - 1	Q10	J - 1	Q909	P - 6	RV512	N - 4		
E204	I - 1	Q11	J - 1	Q910	P - 6	RV513	O - 4		
E409	P - 7	Q12	K - 1	Q911	P - 1	RV514	O - 5		
E410	N - 6	Q13	K - 1	Q912	J - 4	RV515	N - 5		
E414	M - 8	Q14	K - 2	Q913	M - 3	RV516	O - 6		
E713	E - 7	Q18	M - 2	Q914	N - 3	RV601	B - 7		
E715	D - 3	Q19	L - 3	Q915	N - 3	RV604	A - 6		
		Q20	L - 3	Q916	O - 3	RV605	B - 5		
FL401	O - 2	Q21	L - 3	Q918	O - 2	RV606	A - 7		
FL701	D - 1	Q22	K - 4	Q920	P - 2	RV701	C - 8		



18-55 (a)

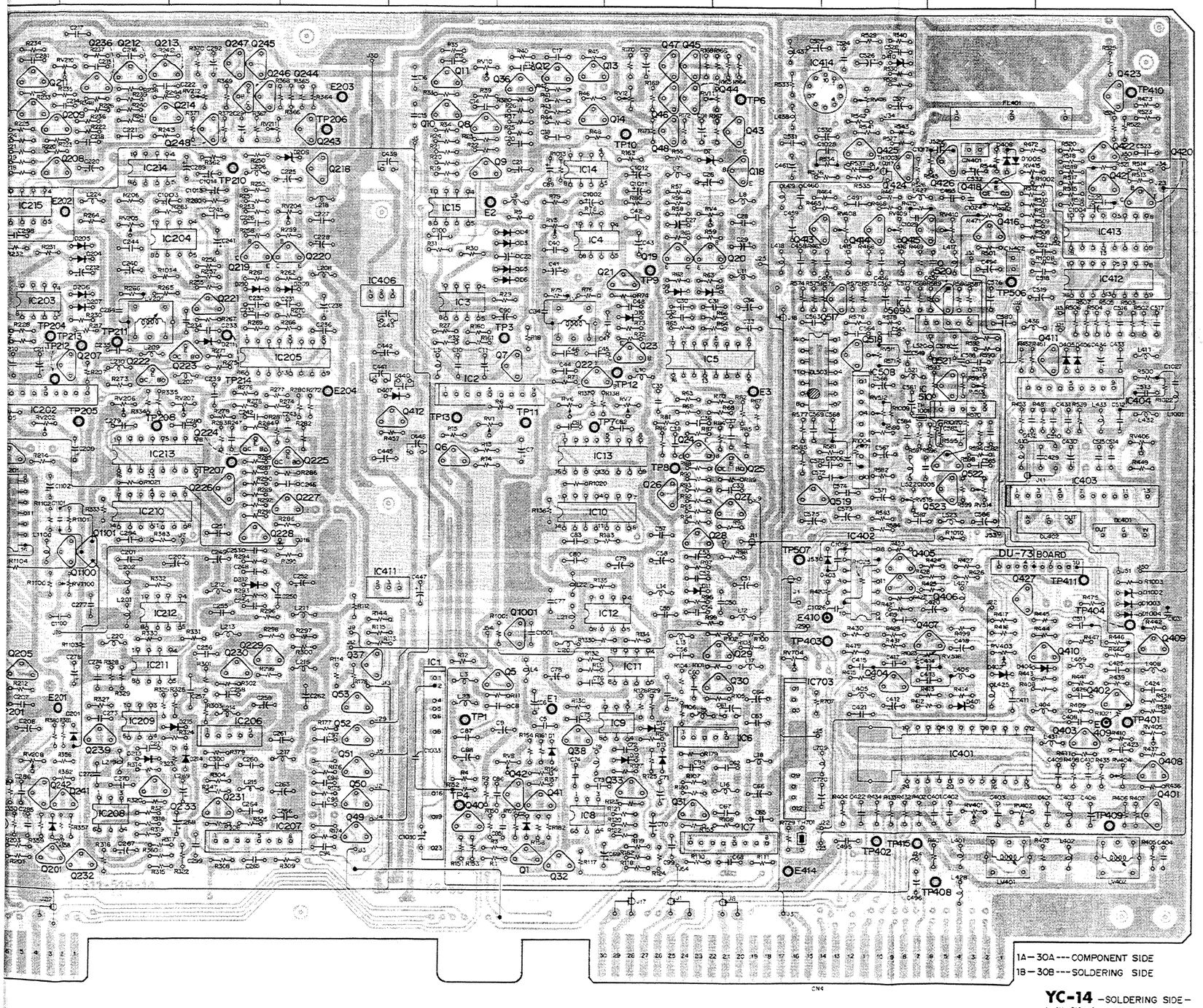
YC-14, DU-73 YC-14, DU-7

YC-14 (Y/C MODULATOR AND DEMODULATOR) UP TO S/N 10390
DU-73



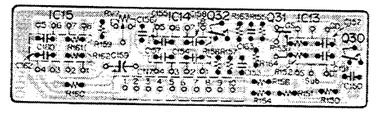
18-56 (a)

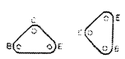
18-57 (a)



18-57 (a)

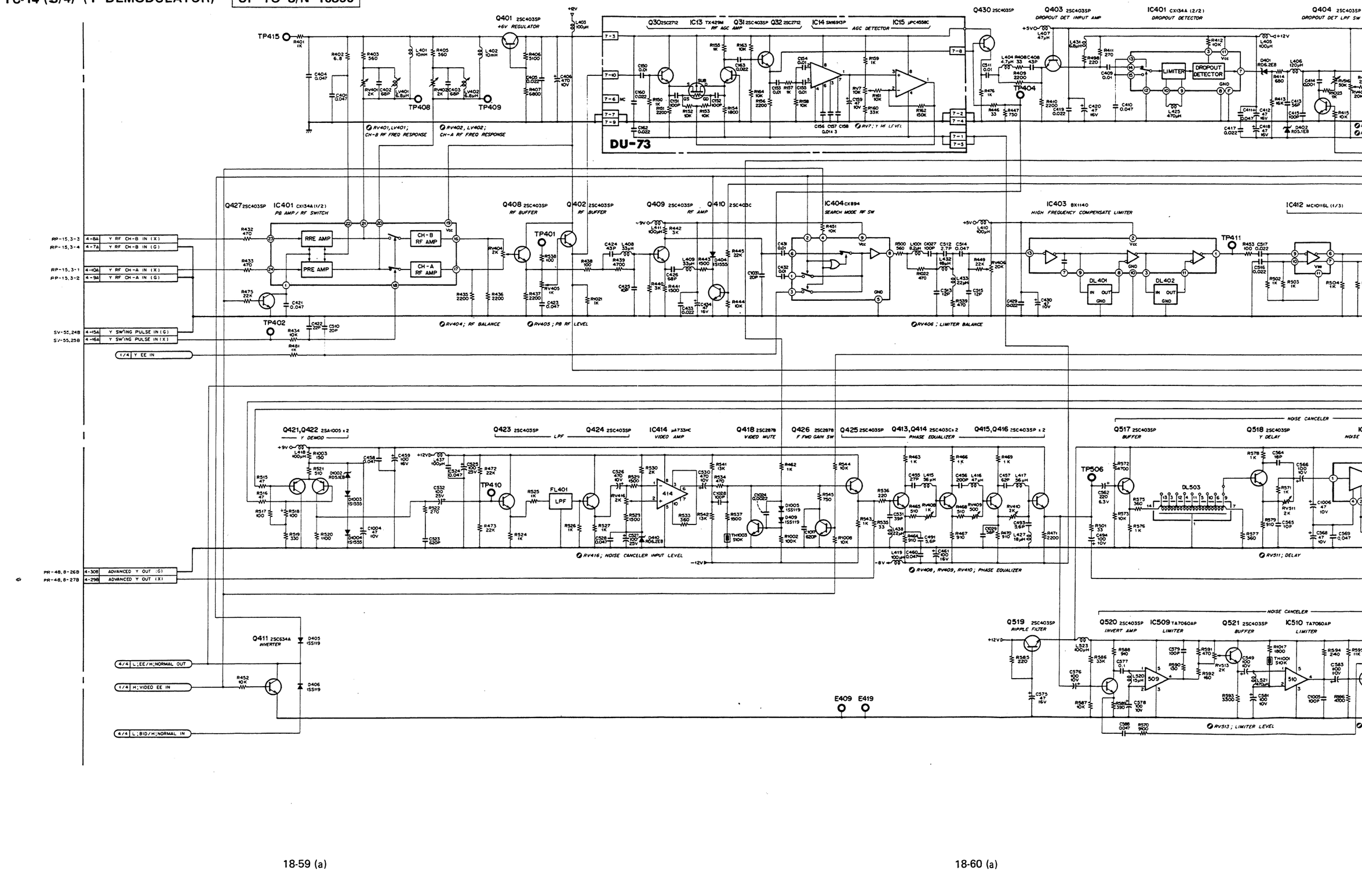
CN3	E - 6	IC1	J - 7	Q23	L - 4	Q421	P - 2	RV702	D - 8
CN4	M - 9	IC2	J - 4	Q24	L - 5	Q422	P - 2	RV703	D - 6
CN401	O - 2	IC3	J - 3	Q25	M - 5	Q423	P - 1	RV704	M - 7
CN402	O - 3	IC4	K - 3	Q26	L - 5	Q424	N - 2	RV706	E - 7
CN801	D - 3	IC5	M - 4	Q27	M - 5	Q425	N - 2	RV707	E - 7
		IC6	M - 7	Q28	L - 5	Q426	O - 2	RV708	E - 5
D1	K - 7	IC7	M - 8	Q29	M - 6	Q427	O - 6	RV716	D - 2
D2	K - 5	IC8	K - 8	Q30	M - 7	Q517	N - 3	RV717	C - 1
D3	K - 3	IC9	L - 7	Q31	L - 8	Q518	N - 4	RV718	A - 1
D4	K - 2	IC10	K - 5	Q32	K - 8	Q519	M - 5	RV812	B - 4
D5	K - 3	IC11	L - 7	Q33	L - 8	Q520	O - 3	RV813	C - 4
D6	K - 3	IC12	L - 6	Q36	K - 1	Q521	O - 4	RV814	C - 2
D7	L - 2	IC13	K - 5	Q37	L - 7	Q522	O - 5	RV815	B - 2
D8	L - 3	IC14	K - 2	Q38	K - 7	Q523	O - 5	RV816	B - 2
D9	L - 3	IC15	J - 2	Q40	J - 8	Q603	A - 6	RV1100	G - 6
D10	L - 3	IC201	F - 7	Q41	K - 8	Q604	B - 4		
D11	L - 6	IC202	F - 4	Q42	K - 5	Q605	A - 5	TH701	M - 8
D12	L - 7	IC203	F - 3	Q43	M - 2	Q701	E - 8	TH1001	N - 4
D13	L - 7	IC204	H - 3	Q44	L - 1	Q702	E - 7	TH1002	B - 2
D14	L - 7	IC205	H - 4	Q45	L - 1	Q703	C - 6	TH1003	N - 2
D201	G - 7	IC206	H - 7	Q46	L - 1	Q704	C - 5	TH1004	B - 1
D202	F - 8	IC207	H - 8	Q47	L - 1	Q705	C - 5		
D204	G - 3	IC208	G - 8	Q48	L - 2	Q706	E - 7	TP1	J - 7
D205	G - 3	IC209	G - 7	Q49	I - 8	Q707	E - 6	TP2	K - 4
D206	G - 3	IC210	G - 5	Q50	I - 8	Q711	B - 1	TP5	J - 8
D207	G - 3	IC211	G - 7	Q51	I - 8	Q712	B - 2	TP6	M - 1
D208	I - 2	IC212	G - 6	Q52	I - 7	Q713	D - 6	TP7	K - 4
D209	I - 3	IC213	G - 5	Q53	I - 7	Q714	C - 1	TP8	L - 5
D210	H - 3	IC214	G - 2	Q201	F - 8	Q716	E - 2	TP9	L - 3
D211	H - 4	IC215	F - 2	Q203	F - 7	Q717	E - 2	TP10	L - 2
D212	H - 6	IC401	O - 7	Q204	F - 5	Q718	E - 2	TP11	K - 4
D213	G - 7	IC402	N - 6	Q206	G - 4	Q719	F - 1	TP12	L - 4
D214	H - 7	IC403	P - 5	Q207	G - 4	Q720	D - 1	TP13	J - 4
D215	H - 7	IC404	P - 4	Q208	F - 2	Q813	C - 3	TP201	F - 7
D401	O - 7	IC405	I - 3	Q209	F - 2	Q814	C - 4	TP203	F - 8
D402	O - 7	IC411	J - 6	Q210	F - 1	Q815	D - 4	TP204	F - 4
D403	N - 6	IC412	P - 3	Q211	F - 1	Q816	D - 3	TP205	G - 4
D404	P - 7	IC413	P - 3	Q212	G - 1	Q817	C - 2	TP206	I - 2
D405	P - 4	IC414	N - 1	Q213	G - 1	Q818	B - 2	TP207	H - 5
D406	P - 4	IC508	N - 4	Q214	G - 2	Q819	A - 3	TP208	G - 1
D407	J - 4	IC509	O - 3	Q218	I - 2	Q1001	K - 6	TP210	H - 2
D408	O - 2	IC510	O - 4	Q219	H - 3	Q1100	G - 6	TP211	G - 4
D410	N - 1	IC602	B - 7	Q220	I - 3	Q1101	G - 6	TP212	H - 3
D601	B - 4	IC603	B - 8	Q221	G - 4			TP213	G - 4
D602	B - 4	IC606	B - 6	Q223	H - 4	RV1	J - 1	TP214	H - 4
D701	D - 7	IC611	A - 6	Q224	H - 5	RV4	L - 2	TP401	P - 7
D702	C - 6	IC612	A - 7	Q225	I - 5	RV5	K - 3	TP402	N - 8
D703	C - 6	IC613	B - 5	Q226	H - 5	RV6	K - 4	TP403	N - 5
D704	B - 2	IC701	C - 7	Q227	I - 5	RV7	L - 4	TP404	P - 6
D705	C - 1	IC702	C - 5	Q228	H - 5	RV8	K - 7	TP408	O - 9
D1002	P - 6	IC703	M - 7	Q229	H - 7	RV10	J - 1	TP409	P - 8
D1003	P - 6	IC706	D - 5	Q230	H - 7	RV11	M - 1	TP410	P - 1
D1004	P - 6	IC707	D - 4	Q231	H - 8	RV12	L - 1	TP411	P - 6
D1005	O - 2	IC714	B - 1	Q232	G - 8	RV202	F - 4	TP415	N - 8
D1006	F - 2	IC715	E - 3	Q233	G - 8	RV204	I - 2	TP506	O - 2
D1007	F - 2	IC716	E - 2	Q236	G - 1	RV205	G - 3	TP507	M - 6
D1008	F - 2	IC717	C - 2	Q238	G - 7	RV206	G - 4	TP601	B - 8
D1009	B - 1	IC810	C - 5	Q240	F - 8	RV207	H - 4	TP605	A - 9
D1010	C - 2	IC811	D - 2	Q241	G - 8	RV208	F - 7	TP606	A - 6
		IC812	C - 2	Q242	F - 5	RV210	G - 1	TP701	D - 7
DL201	F - 5			Q245	I - 2	RV211	H - 2	TP702	B - 8
DL401	P - 5	LV1	K - 3	Q244	H - 1	RV212	H - 1	TP703	C - 5
DL402	P - 5	LV201	G - 3	Q245	H - 1	RV401	O - 8	TP708	D - 6
DL503	M - 4	LV401	O - 8	Q246	H - 1	RV402	O - 8	TP709	D - 7
DL601	A - 4	LV402	P - 8	Q247	H - 1	RV403	O - 6	TP710	E - 6
DL701	E - 5	LV701	D - 8	Q248	H - 2	RV404	P - 8	TP711	D - 5
DL702	D - 5	LV702	E - 8	Q401	P - 8	RV405	P - 7	TP712	A - 1
DL802	C - 3			Q402	P - 7	RV406	P - 7	TP715	C - 8
		Q1	K - 8	Q403	P - 7	RV408	N - 3	TP806	D - 3
E1	K - 7	Q5	K - 7	Q404	N - 7	RV409	N - 3	TP807	C - 5
E2	J - 2	Q6	J - 5	Q405	N - 6	RV410	O - 3		
E3	M - 4	Q7	K - 4	Q406	N - 6	RV415	O - 2		
E201	F - 7	Q8	J - 2	Q407	O - 6	RV416	N - 1		
E202	G - 2	Q9	J - 2	Q408	P - 8	RV511	N - 4		
E203	I - 1	Q10	J - 1	Q409	P - 6	RV512	N - 4		
E204	I - 1	Q11	J - 1	Q410	P - 6	RV513	O - 4		
E406	P - 7	Q12	K - 1	Q411	P - 4	RV514	O - 5		
E410	N - 6	Q13	K - 1	Q412	J - 4	RV515	N - 5		
E414	M - 8	Q14	K - 2	Q413	M - 3	RV516	O - 6		
E713	E - 7	Q18	M - 2	Q414	N - 3	RV601	B - 7		
E715	D - 3	Q19	L - 3	Q415	N - 3	RV604	A - 6		
		Q20	L - 3	Q416	O - 3	RV605	B - 5		
FL401	O - 2	Q21	L - 3	Q418	O - 2	RV606	A - 7		
FL701	D - 1	Q22	K - 4	Q420	P - 2	RV701	C - 8		

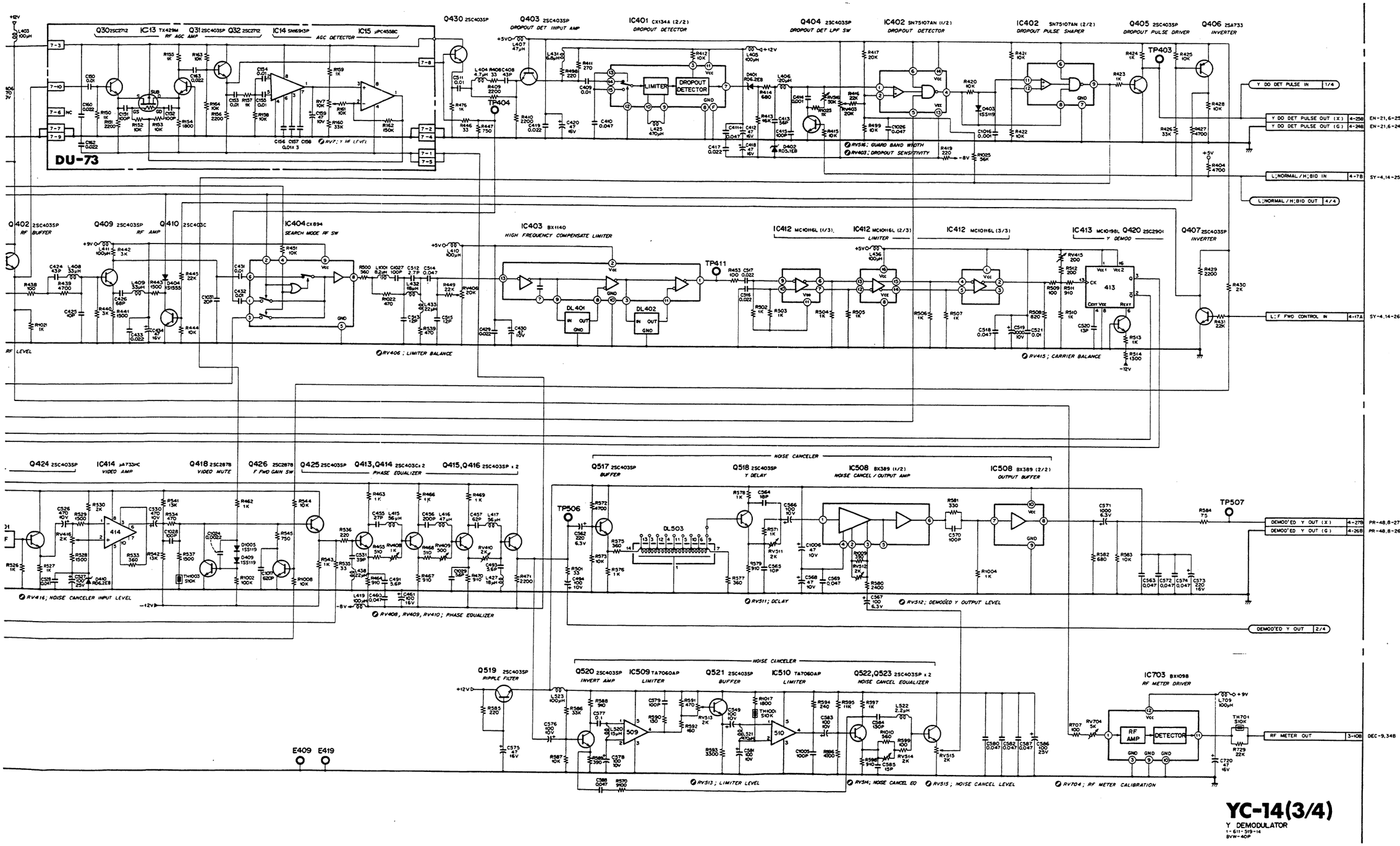




18-58 (a)

YC-14 (3/4) (Y DEMODULATOR) UP TO S/N 10390





YC-14(3/4)

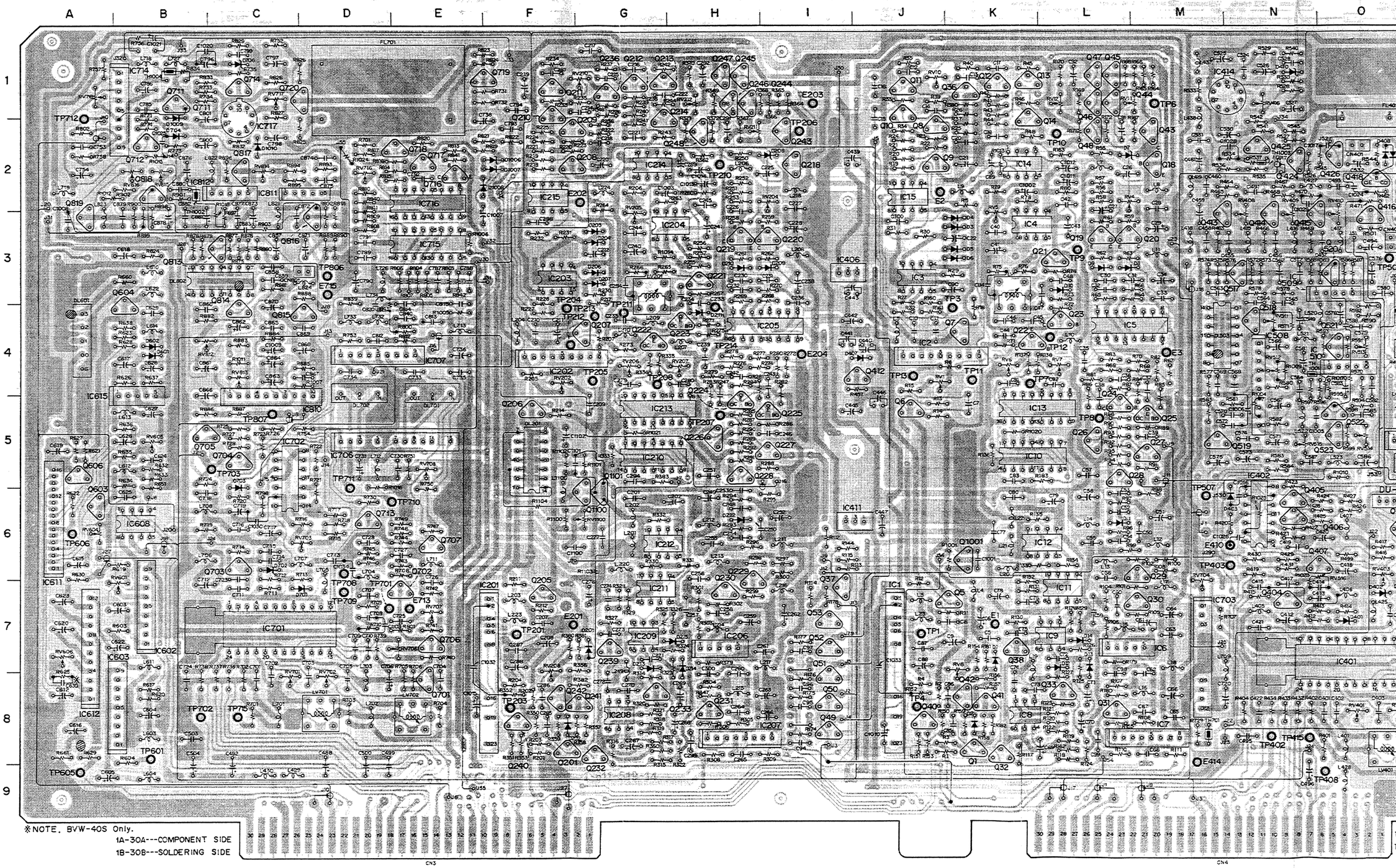
Y DEMODULATOR

1-611-519-14

8VW-40P

YC-14 YC-14

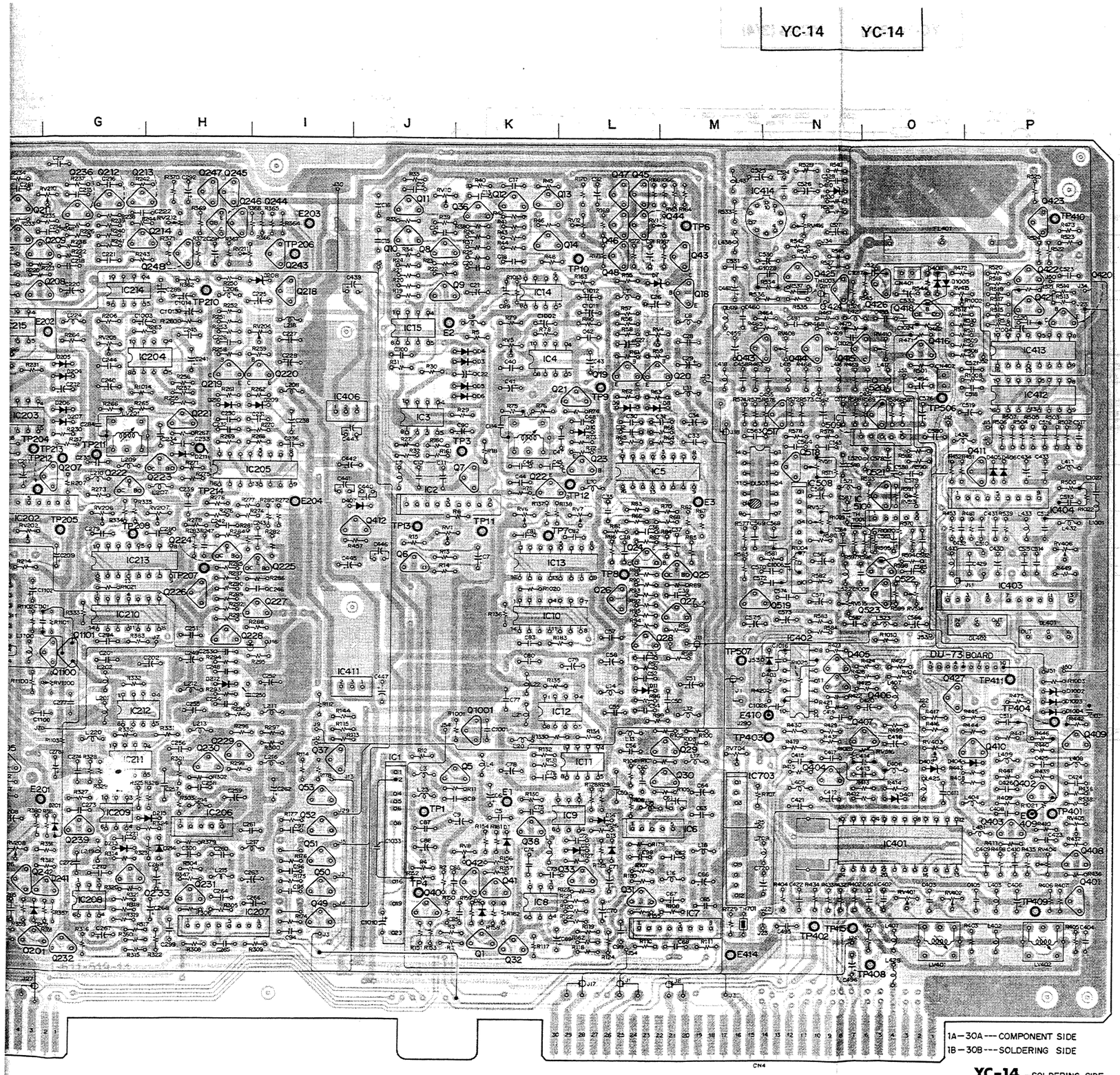
YC-14 (Y/C MODULATOR AND DEMODULATOR) UP TO S/N 10390



※NOTE. BVW-40S Only.
1A-30A---COMPONENT SIDE
1B-30B---SOLDERING SIDE

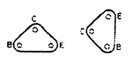
18-62 (a)

18-63 (a)



18-63 (a)

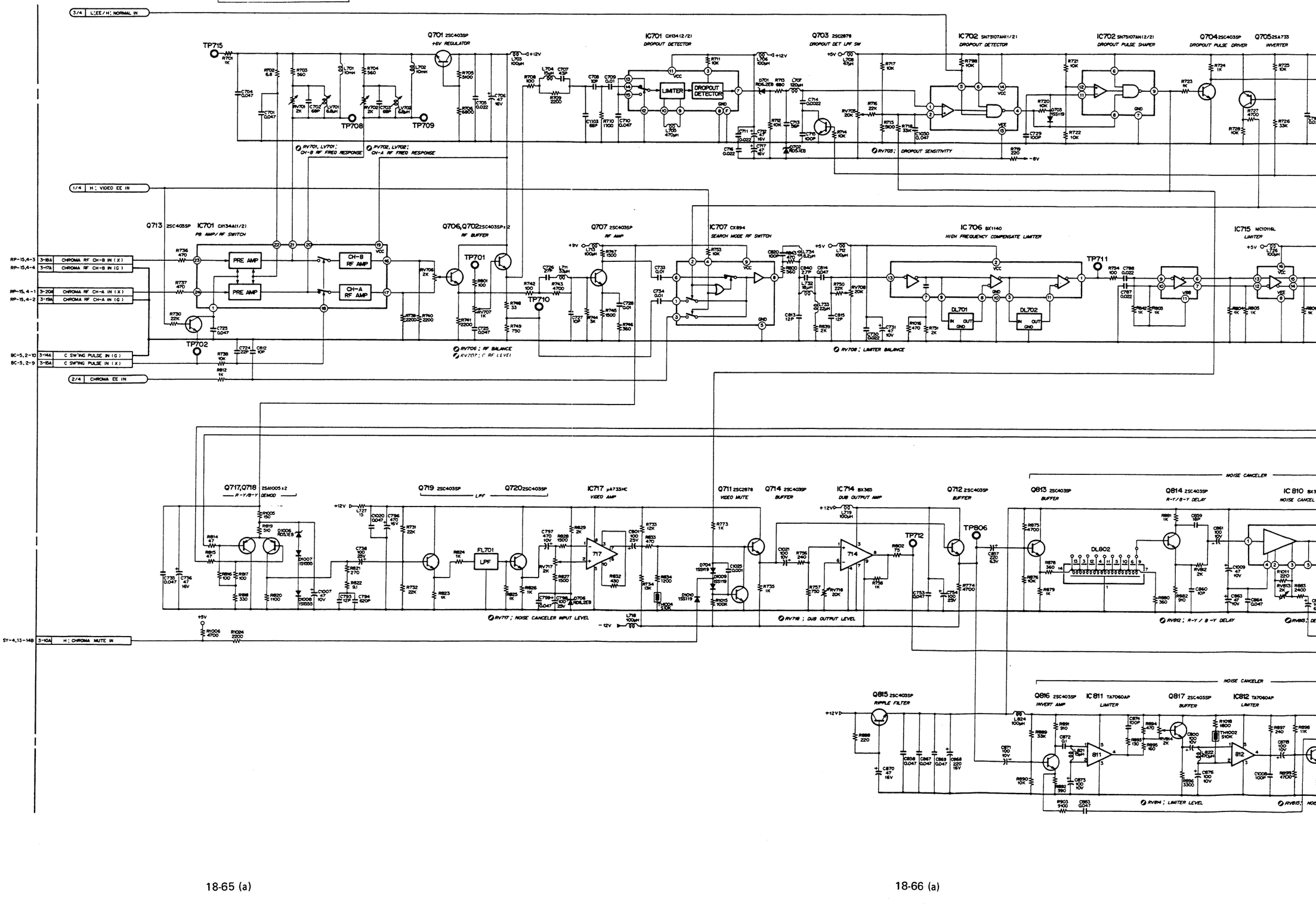
CN3	E - 9	IC1	J - 7	Q23	L - 4	Q421	P - 2	RV702	D - 8		
CN4	M - 9	IC2	J - 4	Q24	L - 5	Q422	P - 2	RV703	D - 6		
CN401	O - 2	IC3	J - 3	Q25	M - 5	Q423	P - 1	RV704	M - 7		
CN402	O - 3	IC4	K - 3	Q26	L - 5	Q424	N - 2	RV706	E - 7		
CN801	D - 3	IC5	M - 4	Q27	M - 5	Q425	N - 2	RV707	E - 7		
		IC6	M - 7	Q28	L - 5	Q426	O - 2	RV708	B - 5		
D1	K - 7	IC7	M - 8	Q29	M - 6	Q427	O - 6	RV716	D - 2		
D2	K - 8	IC8	K - 8	Q30	M - 7	Q517	N - 3	RV717	C - 1		
D3	K - 3	IC9	L - 7	Q31	L - 8	Q518	N - 4	RV718	A - 1		
D4	K - 3	IC10	K - 5	Q32	K - 8	Q519	M - 5	RV812	B - 4		
D5	K - 3	IC11	L - 7	Q33	L - 8	Q520	O - 3	RV813	C - 4		
D6	K - 3	IC12	L - 6	Q36	K - 1	Q521	O - 4	RV814	C - 2		
D7	L - 2	IC13	K - 5	Q37	I - 7	Q522	O - 5	RV815	B - 2		
D8	L - 3	IC14	K - 2	Q38	K - 7	Q523	O - 5	RV816	B - 2		
D9	L - 3	IC15	J - 2	Q40	J - 8	Q603	A - 6	RV1100	G - 6		
D10	L - 3	IC201	F - 7	Q41	K - 8	Q604	B - 4				
D11	L - 6	IC202	F - 4	Q42	K - 8	Q606	A - 5	TH701	M - 8		
D12	L - 7	IC203	F - 3	Q43	M - 2	Q701	E - 8	TH1001	N - 4		
D13	L - 7	IC204	H - 3	Q44	L - 1	Q702	E - 7	TH1002	B - 2		
D14	L - 7	IC205	H - 4	Q45	L - 1	Q703	C - 6	TH1003	N - 2		
D201	G - 7	IC206	H - 7	Q46	L - 1	Q704	C - 5	TH1004	B - 1		
D202	F - 8	IC207	H - 8	Q47	L - 1	Q705	C - 5				
D204	G - 3	IC208	G - 8	Q48	L - 2	Q706	E - 7	TP1	J - 7		
D205	G - 3	IC209	G - 7	Q49	I - 8	Q707	E - 6	TP3	K - 4		
D206	G - 3	IC210	G - 5	Q50	I - 8	Q711	B - 1	TP4	J - 8		
D207	G - 3	IC211	G - 7	Q51	I - 8	Q712	B - 2	TP6	M - 1		
D208	I - 2	IC212	G - 6	Q52	I - 7	Q713	D - 6	TP7	K - 4		
D209	I - 3	IC213	G - 5	Q53	I - 7	Q714	C - 1	TP8	L - 5		
D210	H - 3	IC214	G - 2	Q201	F - 8	Q716	E - 2	TP9	L - 3		
D211	H - 4	IC215	F - 2	Q205	F - 7	Q717	E - 2	TP10	K - 2		
D212	H - 6	IC401	O - 7	Q207	F - 5	Q718	E - 2	TP11	K - 1		
D213	G - 7	IC402	N - 6	Q208	G - 4	Q719	F - 1	TP12	L - 4		
D214	H - 7	IC403	P - 5	Q208	F - 2	Q720	D - 1	TP13	J - 4		
D215	H - 7	IC404	P - 4	Q209	F - 2	Q813	C - 3	TP201	F - 7		
D401	O - 7	IC406	I - 3	Q210	F - 1	Q814	C - 4	TP203	F - 8		
D402	O - 7	IC411	J - 6	Q211	F - 1	Q815	D - 4	TP204	F - 4		
D403	N - 6	IC412	P - 3	Q212	G - 1	Q816	D - 3	TP205	G - 4		
D404	P - 7	IC413	P - 3	Q213	G - 1	Q817	C - 2	TP206	I - 2		
D405	P - 4	IC414	N - 1	Q214	G - 1	Q818	B - 2	TP207	L - 5		
D406	P - 4	IC508	N - 1	Q219	I - 2	Q819	A - 3	TP208	G - 4		
D407	J - 4	IC509	O - 3	Q219	H - 3	Q1001	K - 6	TP210	H - 2		
D408	O - 2	IC510	O - 4	Q220	I - 3	Q1100	G - 6	TP211	G - 4		
D410	N - 1	IC602	B - 7	Q221	H - 3	Q1101	G - 6	TP212	F - 4		
D601	B - 4	IC603	B - 8	Q222	G - 4			TP213	G - 4		
D602	B - 4	IC608	B - 6	Q223	H - 4	RV1	J - 4	TP214	H - 4		
D701	D - 7	IC611	A - 6	Q224	H - 5	RV4	L - 2	TP401	P - 7		
D702	C - 6	IC612	A - 7	Q225	I - 5	RV5	K - 3	TP402	N - 8		
D703	C - 6	IC615	B - 5	Q226	H - 5	RV6	K - 4	TP403	N - 6		
D704	B - 2	IC701	C - 7	Q227	I - 5	RV7	L - 4	TP404	P - 6		
D706	C - 1	IC702	C - 5	Q228	H - 5	RV8	K - 7	TP408	O - 9		
D1002	P - 6	IC703	M - 7	Q229	H - 7	RV10	J - 1	TP409	P - 8		
D1003	P - 6	IC706	D - 5	Q230	H - 7	RV11	M - 1	TP410	P - 1		
D1004	P - 6	IC707	D - 4	Q231	H - 8	RV12	L - 1	TP411	P - 6		
D1005	O - 2	IC714	B - 1	Q232	G - 8	RV202	F - 4	TP415	N - 8		
D1006	F - 2	IC715	E - 3	Q233	G - 8	RV204	I - 2	TP506	O - 3		
D1007	F - 2	IC716	E - 2	Q236	G - 1	RV205	G - 3	TP507	M - 6		
D1008	F - 2	IC717	C - 2	Q238	G - 7	RV206	G - 4	TP601	B - 8		
D1009	B - 1	IC810	C - 5	Q240	F - 8	RV207	H - 4	TP605	A - 9		
D1010	C - 2	IC811	D - 2	Q241	G - 8	RV208	F - 7	TP606	A - 6		
		IC812	C - 2	Q242	F - 8	RV210	G - 1	TP701	D - 7		
DL201	F - 5			Q243	I - 2	RV211	H - 2	TP702	B - 8		
DL401	P - 5	LV1	K - 3	Q244	H - 1	RV212	H - 1	TP703	C - 5		
DL402	P - 5	LV201	G - 3	Q245	H - 1	RV401	O - 8	TP708	D - 6		
DL803	M - 4	LV451	O - 8	Q246	H - 1	RV402	O - 8	TP709	D - 7		
DL801	A - 4	LV402	P - 8	Q247	H - 1	RV403	O - 6	TP710	B - 6		
DL701	E - 5	LV701	D - 5	Q248	H - 2	RV404	P - 8	TP711	D - 5		
DL702	D - 5	LV702	E - 8	Q401	P - 8	RV405	P - 7	TP712	A - 1		
DL802	C - 3			Q402	P - 7	RV406	P - 4	TP715	C - 8		
		Q2	K - 8	Q403	P - 7	RV408	N - 3	TP806	D - 3		
E1	K - 7	Q5	K - 7	Q404	N - 7	RV409	N - 3	TP807	C - 5		
E2	J - 2	Q6	J - 5	Q405	N - 6	RV410	O - 3				
E3	M - 4	Q7	K - 4	Q406	N - 6	RV415	O - 2				
E201	F - 7	Q8	J - 2	Q407	O - 6	RV416	N - 1				
E202	G - 2	Q9	J - 2	Q408	P - 8	RV511	N - 4				
E203	I - 1	Q10	J - 1	Q409	P - 6	RV512	N - 4				
E204	I - 4	Q11	J - 1	Q410	P - 6	RV513	O - 4				
E409	P - 7	Q12	K - 1	Q411	P - 4	RV514	O - 5				
E410	N - 6	Q13	K - 1	Q412	J - 4	RV515	N - 5				
E414	M - 8	Q14	K - 2	Q413	M - 3	RV516	O - 6				
E713	E - 7	Q18	M - 2	Q414	N - 3	RV601	B - 7				
E715	D - 3	Q19	L - 3	Q415	N - 3	RV604	A - 6				
		Q20	L - 3	Q416	O - 3	RV605	B - 5				
FL401	O - 2	Q21	L - 3	Q418	O - 2	RV606	A - 7				
FL701	D - 1	Q22	K - 4	Q420	P - 2	RV701	C - 8				



18-64 (a)

YC-14 (4/4) (CHROMA DEMODULATOR)

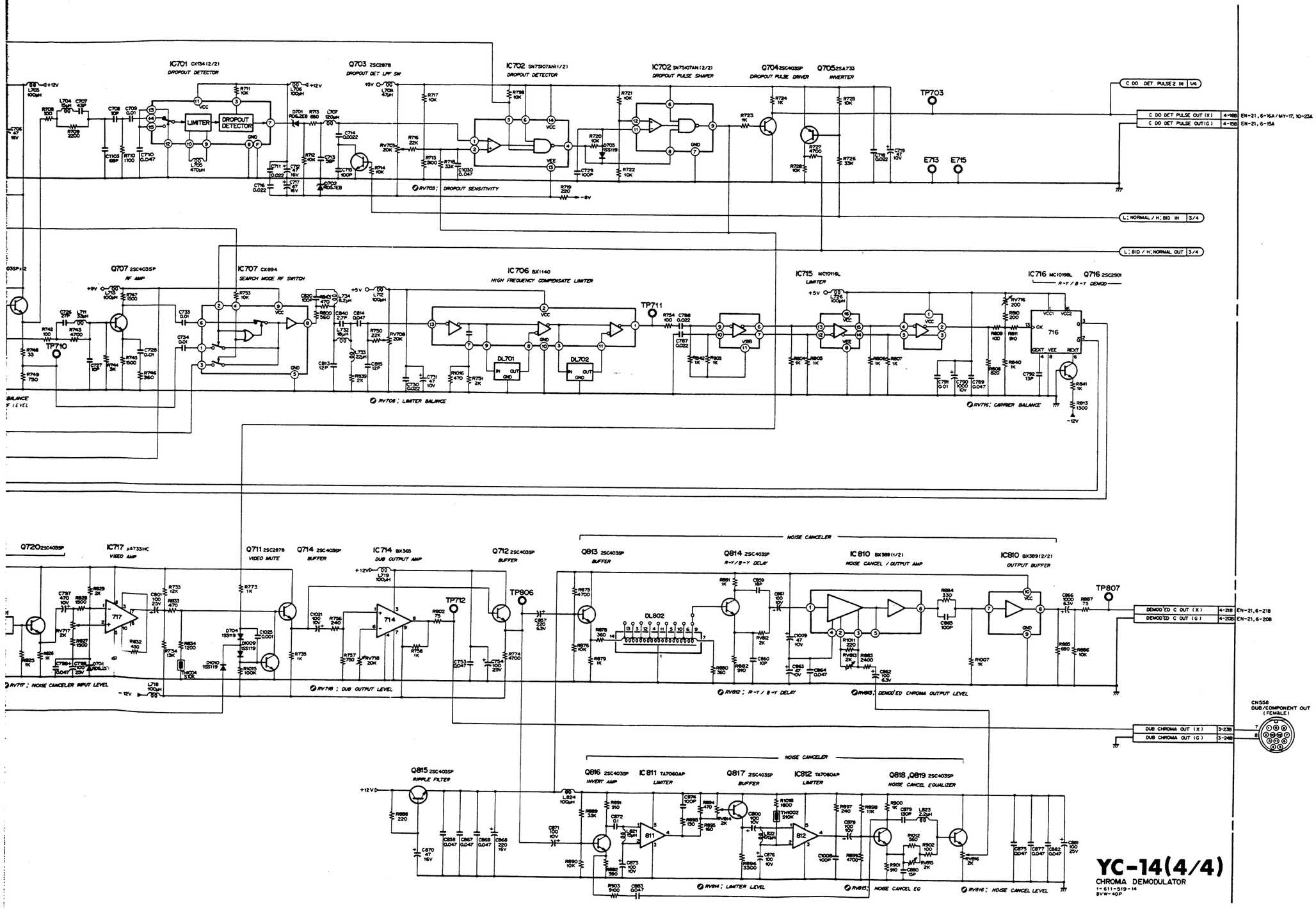
UP TO S/N 10390



18-65 (a)

18-66 (a)

YC-14 (4/4)



YC-14(4/4)

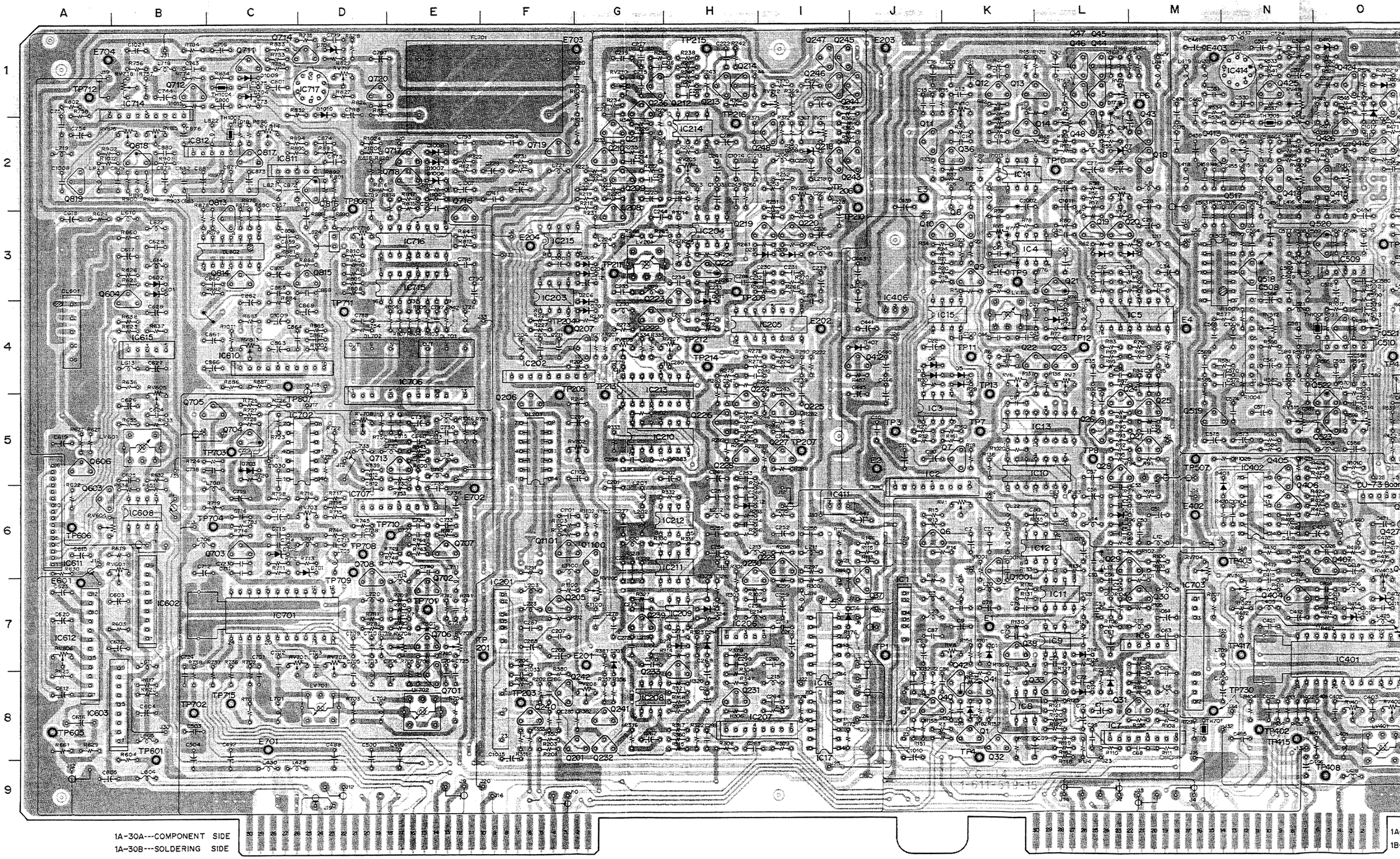
CHROMA DEMODULATOR

1-611-519-14

8VW-40P

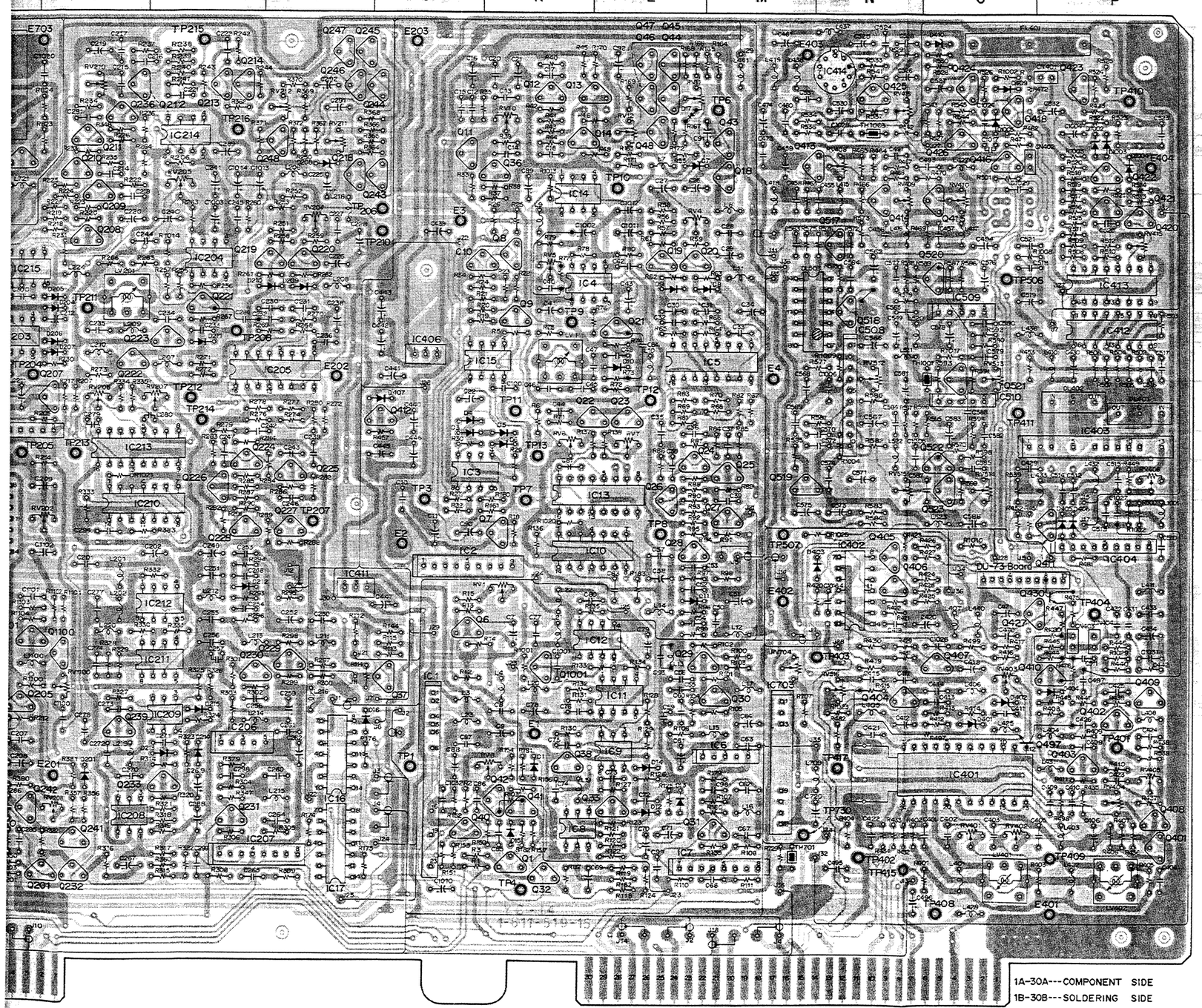
YC-14 YC-14

YC-14 (Y/C MODULATOR AND DEMODULATOR) S/N 10391 TO 11272



18-42 (b)

18-43 (b)



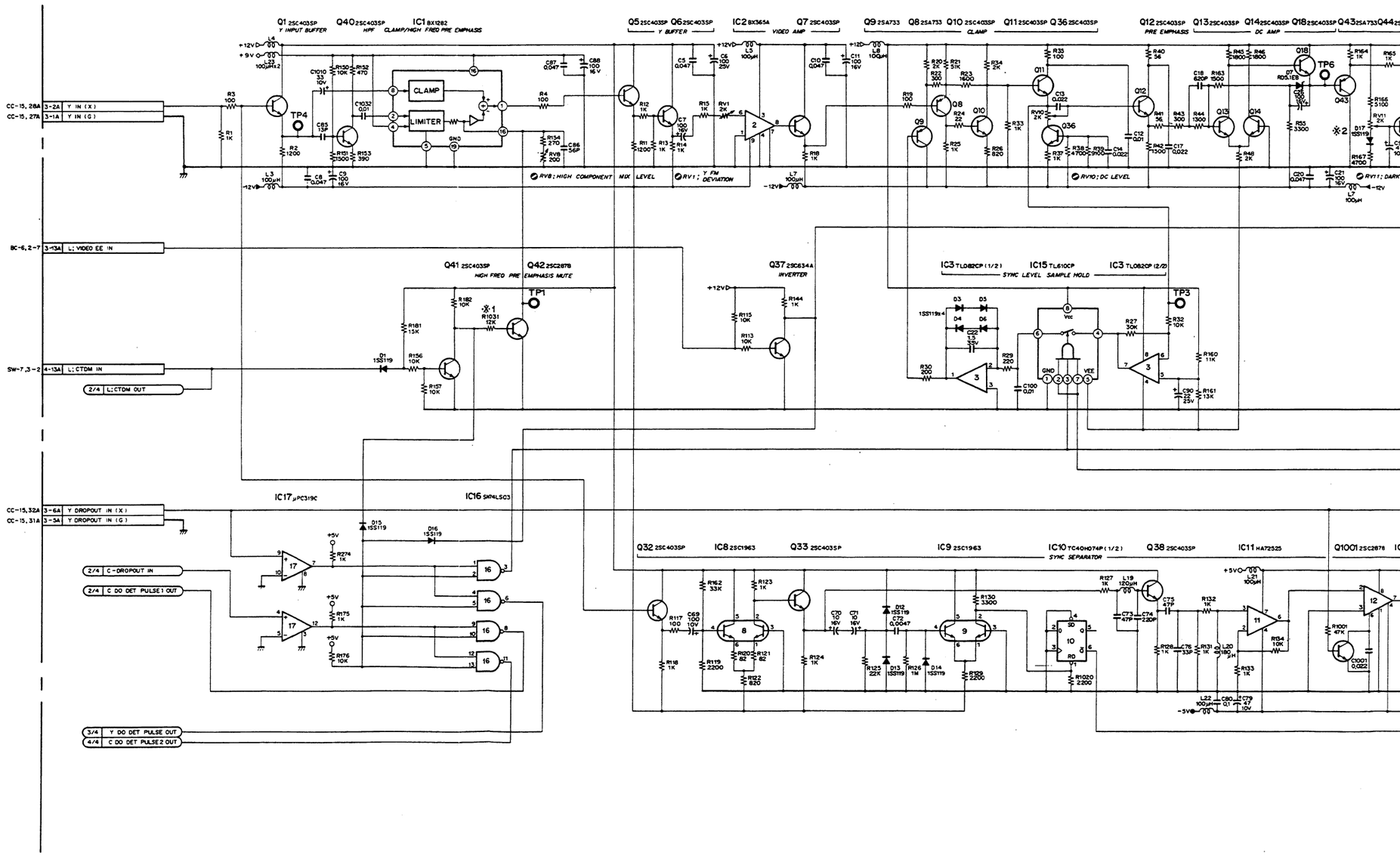
18-43 (b)

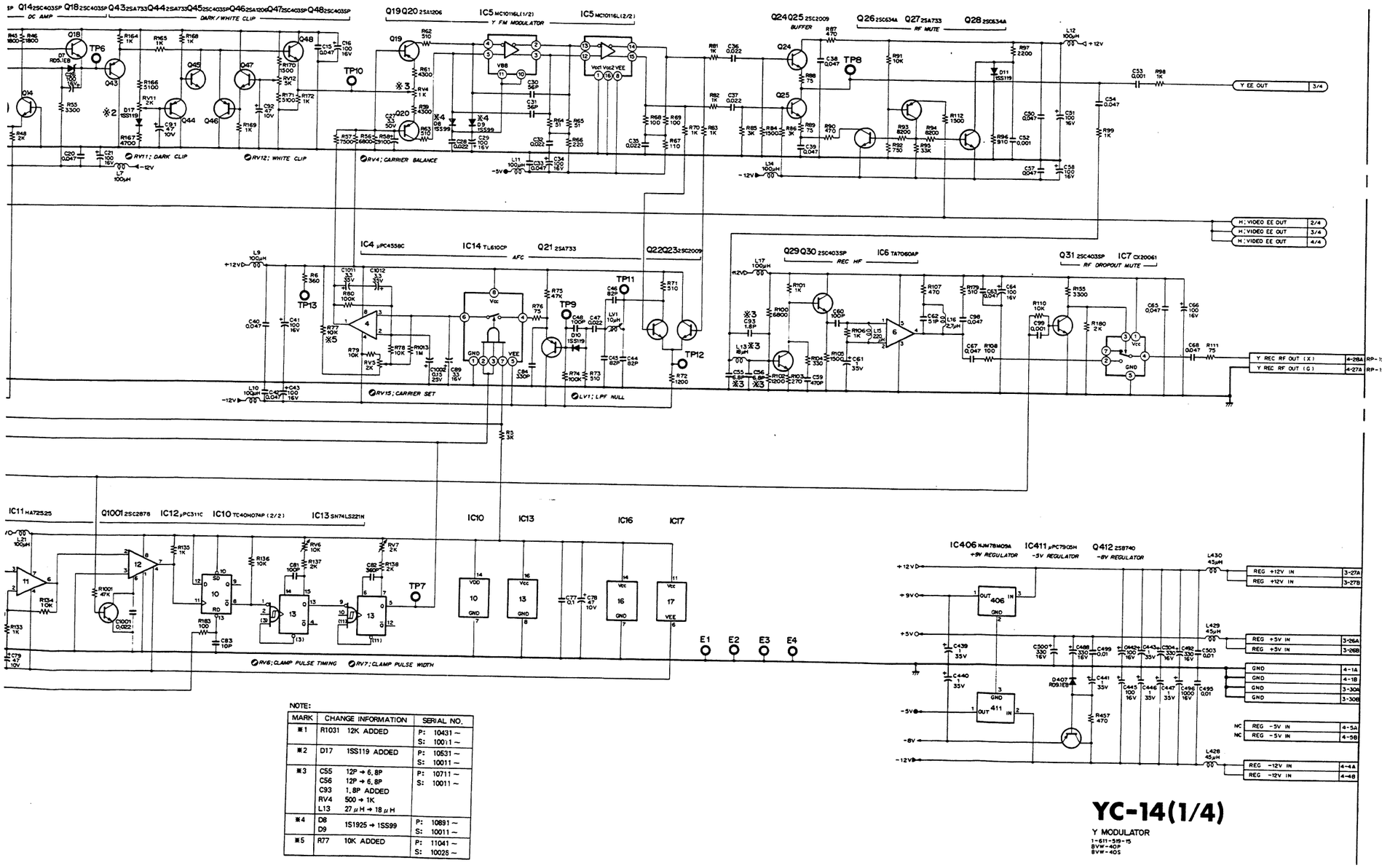
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CN402	O - 2	E703	F - 1	Q12	K - 1	Q416	O - 2	RV604	A - 6		
CN403	P - 6	E704	A - 1	Q13	K - 1	Q418	O - 1	RV605	B - 5		
CN404	P - 6			Q14	K - 2	Q420	P - 2	RV606	A - 7		
CN701	D - 3	FL401	G - 1	Q18	M - 2	Q421	P - 2	RV701	C - 7		
		FL701	E - 1	Q19	L - 3	Q422	P - 2	RV702	D - 7		
D1	K - 7			Q20	L - 3	Q423	P - 1	RV703	D - 6		
D3	J - 4	IC1	J - 7	Q21	L - 3	Q424	O - 1	RV704	M - 6		
D4	J - 4	IC2	J - 6	Q22	K - 4	Q425	N - 1	RV706	E - 7		
D5	K - 4	IC3	J - 5	Q23	L - 4	Q426	O - 2	RV707	E - 7		
D6	K - 4	IC4	K - 3	Q24	L - 5	Q427	O - 6	RV708	D - 5		
D7	L - 2	IC5	M - 4	Q25	M - 5	Q430	P - 6	RV716	D - 3		
D8	L - 3	IC6	M - 7	Q26	L - 5	Q497	O - 7	RV717	D - 1		
D9	L - 3	IC7	L - 8	Q27	M - 5	Q517	N - 3	RV718	B - 1		
D10	L - 4	IC8	K - 8	Q28	L - 5	Q518	N - 3	RV813	C - 4		
D11	L - 6	IC9	L - 7	Q29	L - 6	Q519	M - 5	RV814	C - 2		
D12	L - 8	IC10	K - 5	Q30	M - 7	Q520	O - 3	RV815	B - 2		
D13	L - 8	IC11	L - 7	Q31	M - 8	Q521	O - 4	RV816	B - 2		
D14	L - 7	IC12	L - 6	Q32	K - 8	Q522	O - 5	RV1100	G - 7		
D15	K - 8	IC13	K - 5	Q33	L - 8	Q523	O - 5				
D16	I - 7	IC14	K - 2	Q35	K - 2	Q603	A - 6	TH701	M - 8		
D17	L - 2	IC15	K - 4	Q36	J - 7	Q604	B - 3	TH1001	O - 4		
D201	G - 7	IC16	I - 7	Q37	K - 7	Q606	A - 5	TH1002	C - 2		
D204	G - 3	IC17	I - 8	Q38	J - 8	Q701	E - 8	TH1003	N - 2		
D205	G - 3	IC201	F - 7	Q41	K - 8	Q702	E - 7	TH1004	C - 1		
D206	G - 4	IC202	F - 4	Q42	K - 8	Q703	C - 6				
D207	G - 4	IC203	F - 3	Q43	M - 2	Q704	C - 5	TP1	J - 7		
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D213	H - 7	IC209	H - 7	Q201	F - 8	Q712	B - 1	TP9	K - 4		
D214	H - 7	IC210	G - 5	Q205	F - 7	Q713	E - 5	TP10	L - 2		
D215	H - 7	IC211	H - 6	Q206	F - 5	Q714	D - 1	TP11	K - 4		
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D402	O - 7	IC213	G - 4	Q208	G - 3	Q717	E - 2	TP13	K - 5		
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D407	J - 4	IC403	P - 4	Q213	H - 1	Q814	C - 3	TP207	I - 5		
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D410	O - 1	IC406	J - 4	Q218	I - 2	Q816	D - 2	TP210	J - 2		
D601	B - 3	IC411	I - 6	Q219	I - 3	Q817	C - 2	TP211	G - 3		
D602	B - 3	IC412	P - 3	Q220	I - 3	Q818	B - 2	TP212	H - 4		
D701	D - 6	IC413	P - 3	Q221	H - 3	Q819	A - 2	TP213	G - 5		
D702	C - 6	IC414	N - 1	Q222	G - 4	Q1001	K - 6	TP214	H - 4		
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D704	C - 1	IC509	O - 3	Q224	H - 5	Q1101	F - 6	TP216	H - 2		
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D1002	P - 2	IC602	B - 7	Q226	H - 5	RV1	K - 6	TP402	N - 8		
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D1004	P - 2	IC608	E - 6	Q228	H - 5	RV5	K - 3	TP404	P - 6		
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D1008	E - 2	IC701	C - 7	Q232	G - 8	RV10	K - 1	TP411	O - 4		
D1009	C - 1	IC702	D - 5	Q233	H - 8	RV11	L - 1	TP415	N - 8		
D1010	D - 1	IC703	M - 7	Q236	G - 1	RV12	L - 2	TP417	N - 7		
		IC706	E - 5	Q239	G - 7	RV202	G - 5	TP506	O - 3		
DL201	F - 5	IC707	D - 6	Q240	F - 8	RV204	I - 2	TP507	M - 5		
DL401	P - 4	IC714	B - 1	Q241	G - 8	RV205	H - 2	TP601	B - 9		
DL402	P - 4	IC715	E - 3	Q242	F - 8	RV206	G - 4	TP605	A - 3		
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DL802	C - 3	IC812	B - 2	Q247	I - 1	RV212	I - 1	TP704	C - 6		
				Q248	I - 2	RV401	O - 8	TP708	D - 6		
E1	K - 7	LV1	K - 4	Q401	P - 8	RV402	O - 8	TP709	D - 6		
E2	J - 5	LV201	G - 3	Q402	P - 7	RV403	O - 7	TP710	E - 6		
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E201	G - 7	LV601	B - 5	Q405	N - 5	RV406	P - 5	TP715	C - 8		
E202	I - 4	LV701	D - 3	Q406	N - 6	RV408	N - 2	TP730	M - 8		
E203	J - 1	LV702	E - 8	Q407	O - 6	RV409	N - 2	TP806	D - 3		
E204	F - 3			Q408	P - 8	RV415	P - 3	TP807	C - 4		
E401	P - 8	Q1	K - 8	Q409	P - 7	RV416	N - 1				
E402	M - 6	Q6	J - 6	Q410	P - 7	RV512	N - 4				
E403	M - 1	Q7	K - 5	Q411	P - 5	RV513	O - 4				
E404	P - 2	Q8	K - 3	Q412	J - 4	RV514	O - 5				
E601	A - 7	Q9	K - 3	Q413	M - 2	RV515	N - 5				
E701	C - 8	Q10	J - 3	Q414	N - 2	RV516	N - 7				

18-44 (b)

YC-14 (1/4) (Y MODULATOR)

S/N 10391 TO 11272





NOTE:

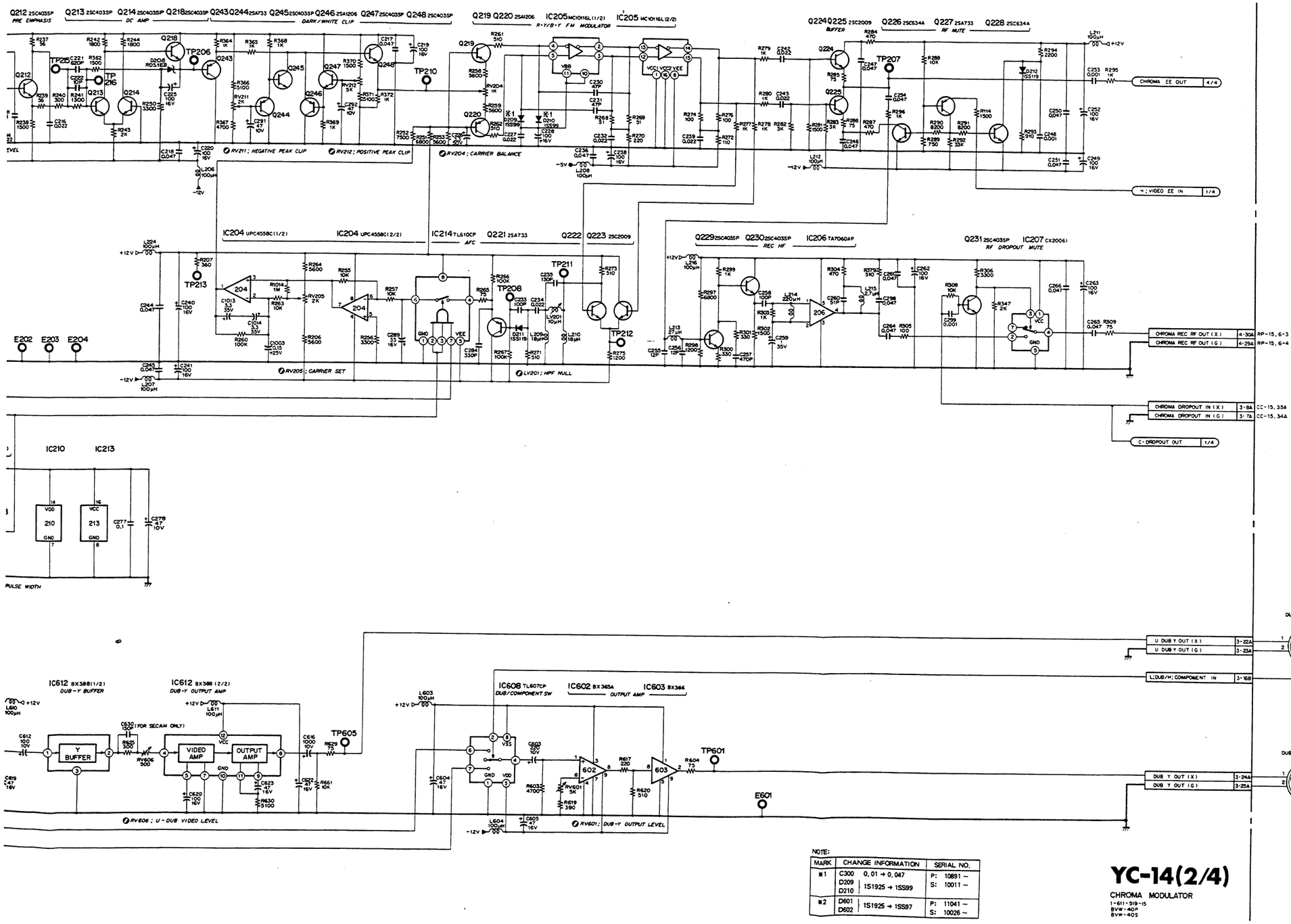
MARK	CHANGE INFORMATION	SERIAL NO.
※1	R1031 12K ADDED	P: 10431 ~ S: 10011 ~
※2	D17 1SS119 ADDED	P: 10531 ~ S: 10011 ~
※3	C55 12P → 6, 8P C56 12P → 6, 8P C93 1, 8P ADDED RV4 500 → 1K L13 27 μH → 18 μH	P: 10711 ~ S: 10011 ~
※4	D8 1S1925 → 1SS99 D9	P: 10891 ~ S: 10011 ~
※5	R77 10K ADDED	P: 11041 ~ S: 10026 ~

YC-14(1/4)

Y MODULATOR

1-611-519-15
8VW-40P
8VW-40S

YC-14 (2/4) (CHROMA MODULATOR) S/N 10391 TO 11272



NOTE:

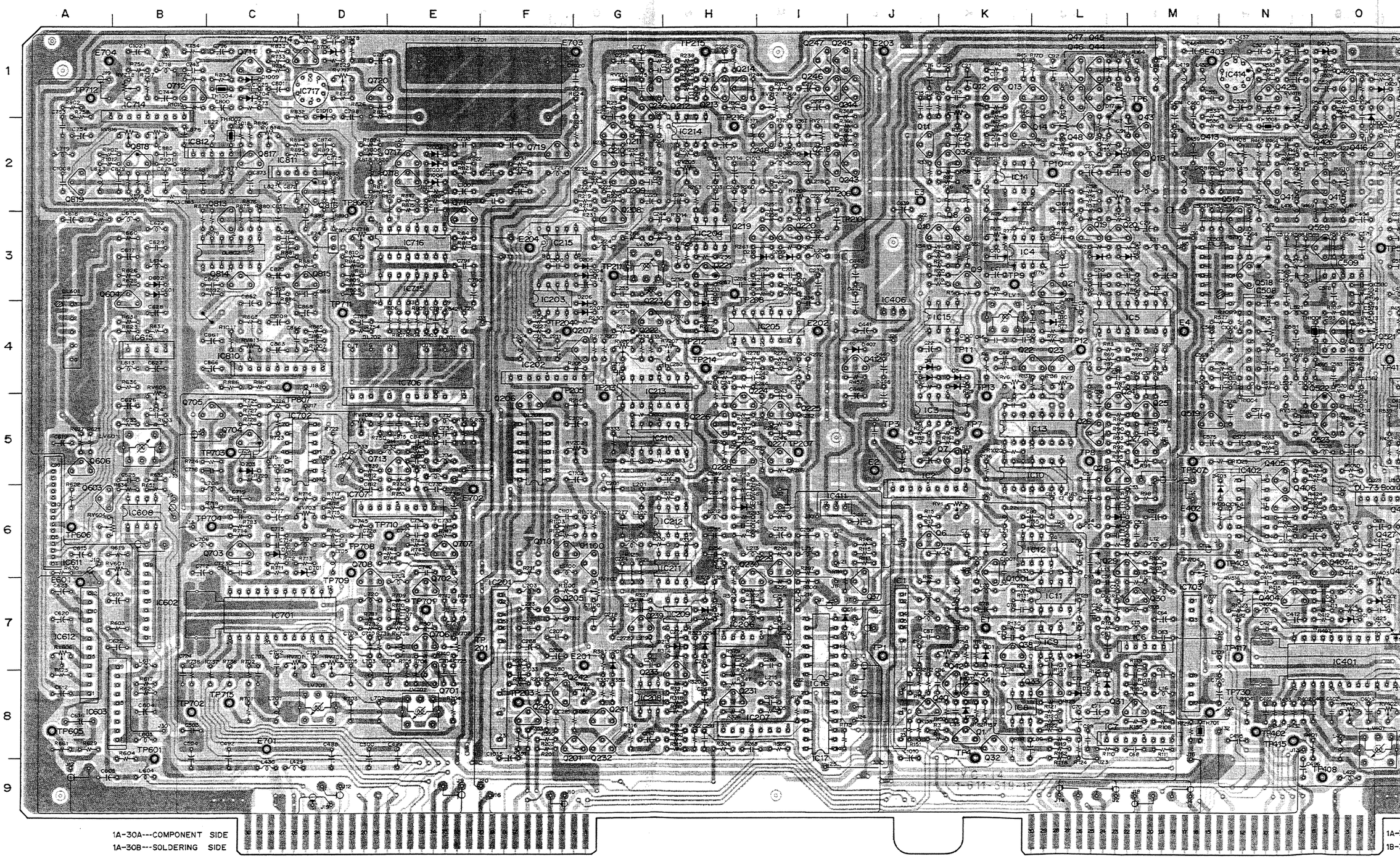
MARK	CHANGE INFORMATION	SERIAL NO.
※1	C300 0.01 → 0.047 D209 | 1S1925 → 1SS99 D210 |	P: 10891 ~ S: 10011 ~
※2	D601 | 1S1925 → 1SS97 D602 |	P: 11041 ~ S: 10026 ~

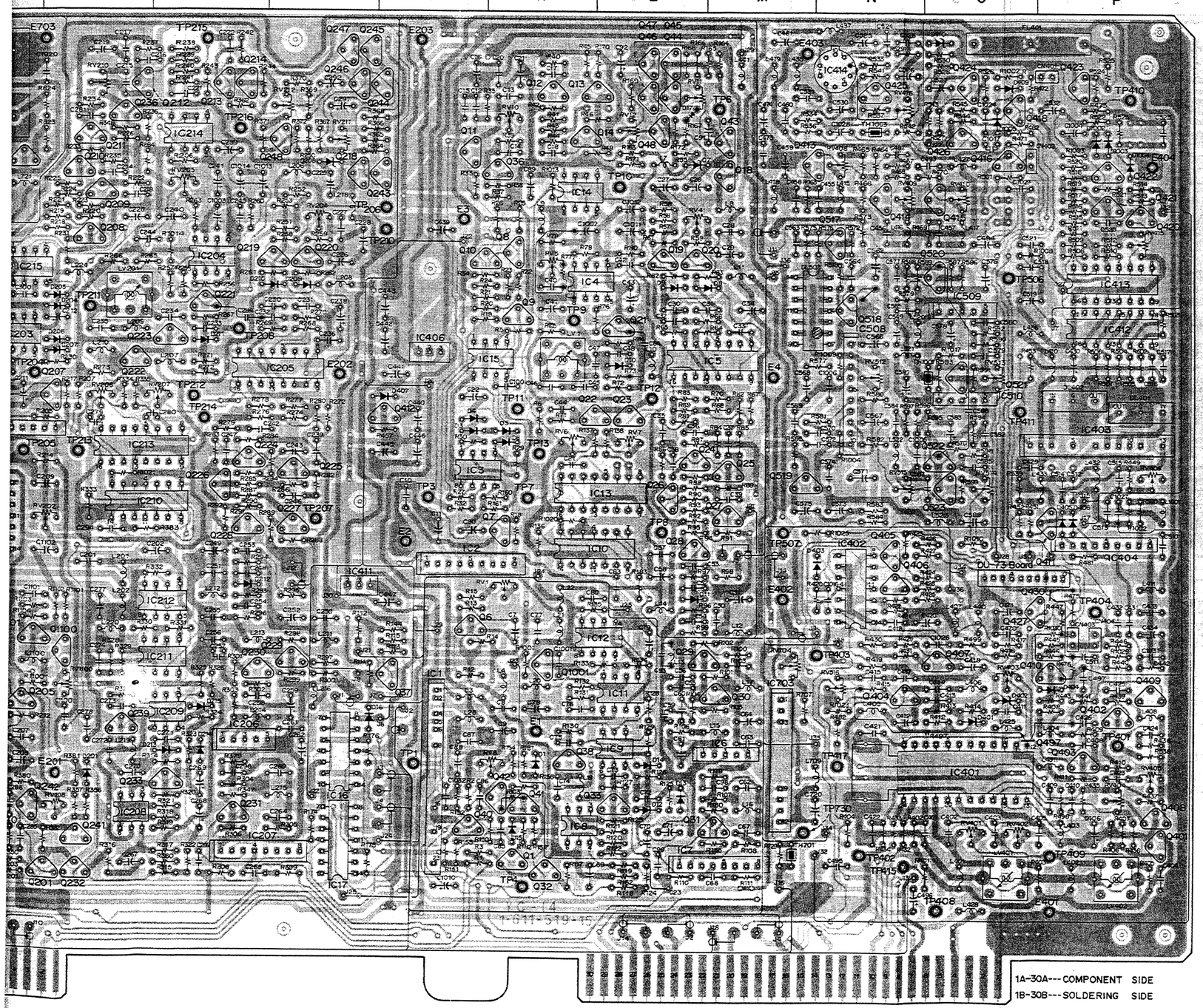
YC-14(2/4)

CHROMA MODULATOR

1-611-519-15
BVW-40P
BVW-40S

YC-14 (Y/C MODULATOR AND DEMODULATOR) S/N 10391 TO 11272



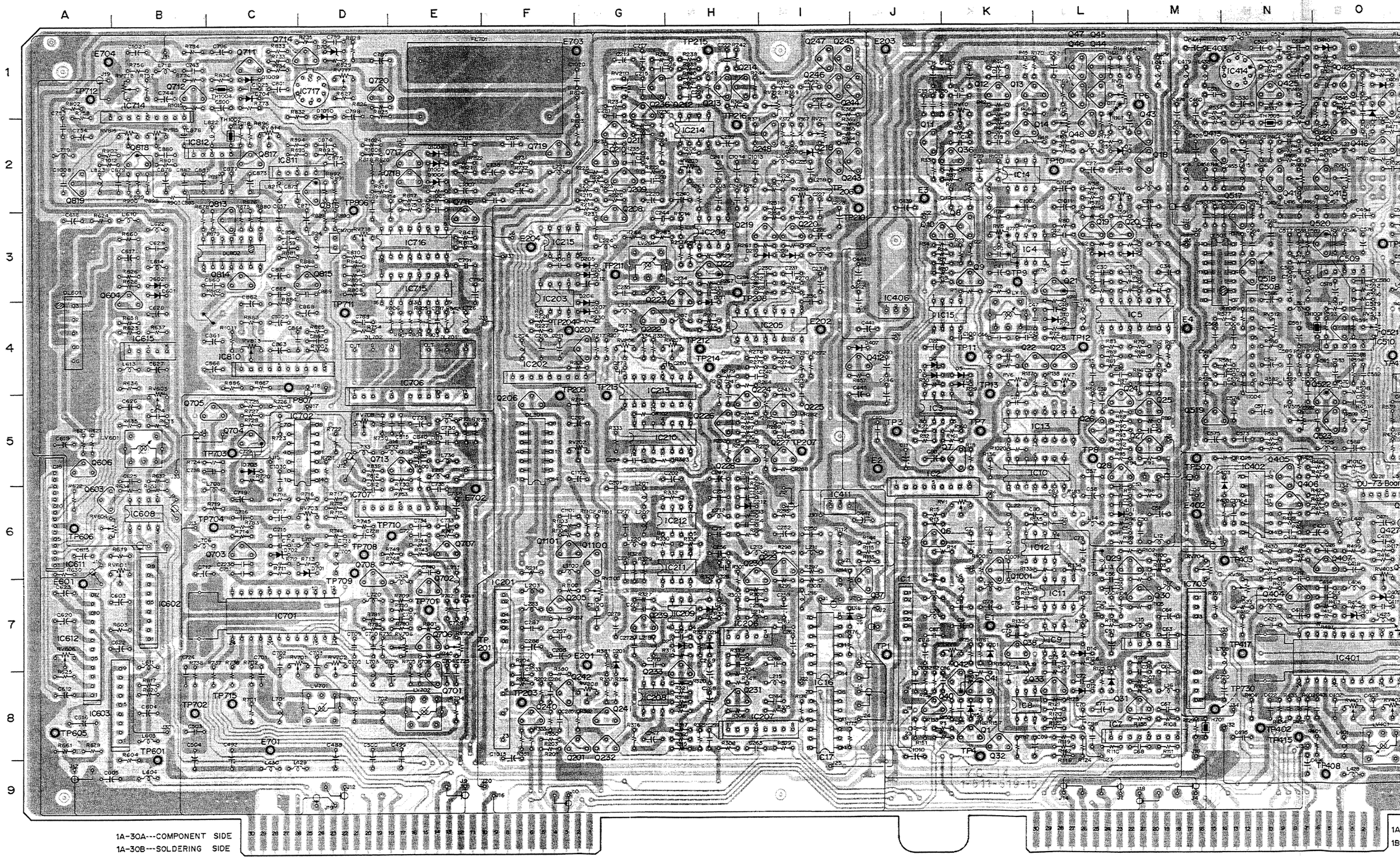


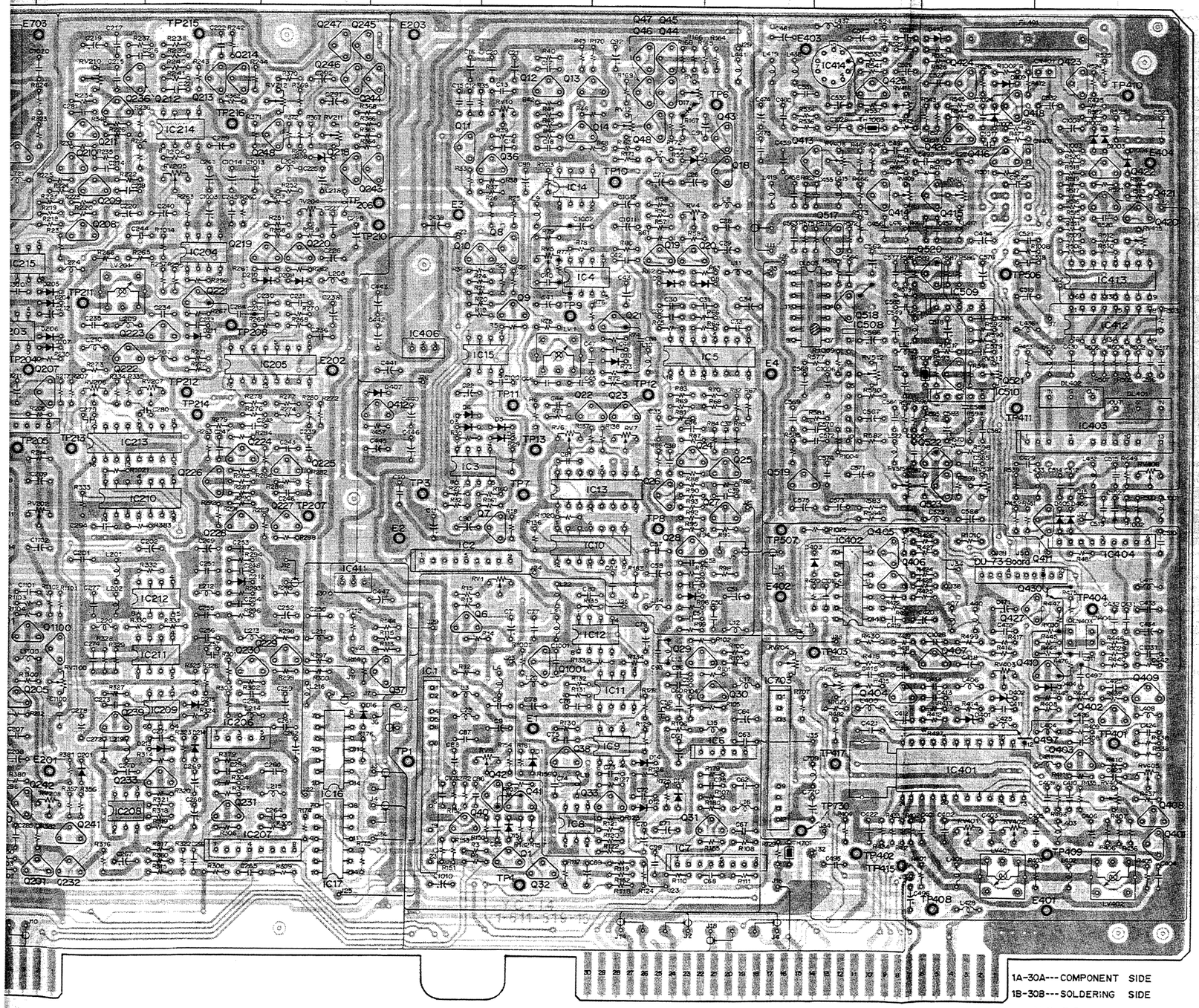
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CN402	O - 2	E703	F - 1	Q12	K - 1	Q416	O - 2	RV604	A - 6
CN403	P - 6	E704	A - 1	Q13	K - 1	Q418	O - 1	RV605	B - 5
CN404	P - 6			Q14	K - 2	Q420	P - 2	RV606	A - 7
CN701	D - 3	FL401	O - 1	Q18	M - 2	Q421	P - 2	RV701	C - 7
		FL701	E - 1	Q19	L - 3	Q422	P - 2	RV702	D - 7
D1	K - 7			Q20	L - 3	Q423	P - 1	RV703	D - 6
D3	J - 4	IC1	J - 7	Q21	L - 3	Q424	O - 1	RV704	M - 6
D4	J - 4	IC2	J - 6	Q22	K - 4	Q425	N - 1	RV706	E - 7
D5	K - 4	IC3	J - 5	Q23	L - 4	Q426	O - 2	RV707	E - 7
D6	K - 4	IC4	K - 3	Q24	L - 5	Q427	O - 6	RV708	D - 5
D7	L - 2	IC5	M - 4	Q25	M - 5	Q430	P - 6	RV716	D - 3
D8	L - 3	IC6	M - 7	Q26	L - 5	Q497	O - 7	RV717	D - 1
D9	L - 3	IC7	L - 8	Q27	M - 5	Q517	N - 3	RV718	B - 1
D10	L - 4	IC8	K - 8	Q28	L - 5	Q518	N - 3	RV813	C - 4
D11	L - 6	IC9	L - 7	Q29	L - 6	Q519	M - 5	RV814	C - 2
D12	L - 8	IC10	K - 5	Q30	M - 7	Q520	O - 3	RV815	B - 2
D13	L - 8	IC11	L - 7	Q31	M - 8	Q521	O - 4	RV816	B - 2
D14	L - 7	IC12	L - 6	Q32	K - 8	Q522	O - 5	RV1100	G - 7
D15	K - 8	IC13	K - 5	Q33	L - 8	Q523	O - 5		
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D17	L - 2	IC15	K - 4	Q37	J - 7	Q604	B - 3	TH1001	G - 4
D201	G - 7	IC16	I - 7	Q38	K - 7	Q606	A - 5	TH1002	C - 2
D204	G - 3	IC17	I - 8	Q40	J - 8	Q701	E - 8	TH1003	N - 2
D205	G - 3	IC201	F - 7	Q41	K - 8	Q702	E - 7	TH1004	C - 1
D206	G - 4	IC202	F - 4	Q42	K - 8	Q703	C - 6		
D207	G - 4	IC203	F - 3	Q43	M - 2	Q704	C - 5	TP1	J - 7
D208	I - 2	IC204	H - 3	Q44	L - 1	Q705	C - 5	TP3	J - 5
D209	I - 3	IC205	I - 4	Q45	L - 1	Q706	E - 7	TP4	K - 8
D210	I - 3	IC206	H - 7	Q46	L - 1	Q707	E - 6	TP6	M - 1
D211	H - 4	IC207	H - 8	Q47	L - 1	Q708	D - 7	TP7	K - 5
D212	H - 6	IC208	G - 8	Q48	L - 2	Q711	C - 7	TP8	L - 5
D213	H - 7	IC209	H - 7	Q201	F - 8	Q712	B - 1	TP9	K - 4
D214	H - 7	IC210	G - 5	Q205	F - 7	Q713	E - 5	TP10	L - 2
D215	H - 7	IC211	H - 6	Q206	F - 5	Q714	D - 1	TP11	K - 4
D401	O - 7	IC212	H - 6	Q207	G - 4	Q716	E - 3	TP12	L - 4
D402	O - 7	IC213	G - 4	Q208	G - 3	Q717	E - 2	TP13	K - 5
D403	N - 6	IC214	H - 2	Q209	G - 2	Q718	E - 2	TP201	F - 7
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D405	P - 5	IC401	O - 7	Q211	G - 2	Q720	D - 1	TP204	F - 1
D406	P - 5	IC402	N - 6	Q212	G - 1	Q813	C - 3	TP205	F - 5
D407	J - 4	IC403	P - 4	Q213	H - 1	Q814	C - 3	TP207	I - 5
D409	O - 1	IC404	P - 5	Q214	H - 1	Q815	D - 3	TP208	H - 3
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D601	B - 3	IC411	I - 6	Q219	I - 3	Q817	C - 2	TP211	G - 3
D602	B - 3	IC412	P - 3	Q220	I - 3	Q818	B - 2	TP212	H - 4
D701	D - 6	IC413	P - 3	Q221	H - 3	Q819	A - 2	TP213	G - 5
D702	C - 6	IC414	N - 1	Q222	G - 4	Q1001	K - 6	TP214	H - 4
D703	C - 5	IC508	N - 4	Q223	H - 4	Q1100	G - 6	TP215	H - 1
D704	C - 1	IC509	O - 3	Q221	H - 5	Q1101	F - 6	TP216	H - 2
D706	D - 1	IC510	O - 4	Q225	I - 5			TP401	P - 7
D1002	F - 2	IC602	B - 7	Q226	H - 5	RV1	K - 6	TP402	N - 8
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D1004	P - 2	IC608	B - 6	Q228	H - 5	RV5	K - 3	TP404	P - 6
D1005	O - 1	IC611	A - 6	Q229	I - 7	RV6	K - 4	TP408	O - 8
D1006	E - 2	IC612	A - 7	Q230	H - 7	RV7	L - 4	TP409	P - 8
D1007	E - 2	IC615	B - 4	Q231	H - 8	RV8	K - 7	TP410	P - 1
D1008	E - 2	IC701	C - 7	Q232	G - 8	RV10	K - 1	TP411	O - 4
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D1010	D - 1	IC703	M - 7	Q236	G - 1	RV12	L - 2	TP417	N - 7
		IC706	E - 5	Q239	G - 7	RV202	G - 5	TP506	O - 3
DL201	F - 5	IC707	D - 6	Q240	F - 8	RV204	I - 2	TP507	M - 5
DL401	P - 4	IC714	B - 1	Q241	G - 8	RV205	H - 2	TP601	B - 9
DL402	P - 4	IC715	E - 3	Q242	F - 8	RV206	G - 4	TP605	A - 8
DL503	M - 3	IC716	E - 3	Q243	J - 2	RV207	H - 4	TP606	A - 6
DL601	A - 4	IC717	D - 1	Q244	J - 1	RV208	G - 8	TP701	E - 7
DL701	E - 4	IC810	C - 4	Q245	I - 1	RV210	G - 1	TP702	B - 8
DL702	D - 4	IC811	C - 2	Q246	I - 1	RV211	I - 2	TP703	C - 5
DL802	C - 3	IC812	B - 2	Q247	I - 1	RV212	I - 1	TP704	C - 6
				Q248	I - 2	RV401	O - 8	TP708	D - 6
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E2	J - 5	LV201	G - 3	Q402	P - 7	RV403	O - 7	TP710	E - 6
E3	J - 2	LV401	O - 8	Q403	P - 7	RV404	P - 8	TP711	D - 4
E4	M - 4	LV402	P - 8	Q404	N - 7	RV405	P - 7	TP712	A - 1
E201	G - 7	LV601	B - 5	Q405	N - 5	RV406	P - 5	TP715	C - 8
E202	I - 4	LV701	D - 8	Q406	N - 6	RV408	N - 2	TP730	M - 8
E203	J - 1	LV702	E - 8	Q407	O - 6	RV409	N - 2	TP806	D - 3
E204	F - 3			Q408	P - 8	RV415	P - 3	TP807	C - 1
E401	P - 8	Q1	K - 8	Q409	P - 7	RV416	N - 1		
E402	M - 6	Q6	J - 6	Q410	P - 7	RV512	N - 4		
E403	M - 1	Q7	K - 5	Q411	P - 5	RV513	O - 4		
E404	P - 2	Q8	K - 3	Q412	J - 4	RV514	O - 5		
E601	A - 7	Q9	K - 3	Q413	M - 2	RV515	N - 5		
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YC-14, DU-73

YC-14, DU-73

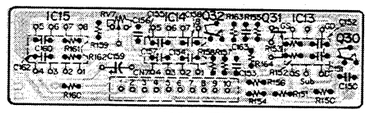
YC-14 (Y/C MODULATOR AND DEMODULATOR) S/N 10391 TO 11272
DU-73


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18-57 (b)

CN401	P - 1	E702	E - 6	Q11	J - 2	Q415	O - 2	RV601	B - 6		
CN402	Q - 2	E703	F - 1	Q12	K - 1	Q416	O - 2	RV604	A - 6		
CN403	P - 6	E704	A - 1	Q13	K - 1	Q418	O - 1	RV605	B - 5		
CN404	P - 6			Q14	K - 2	Q420	P - 2	RV606	A - 7		
CN701	D - 3	FL401	O - 1	Q18	M - 2	Q421	P - 2	RV701	C - 7		
		FL701	E - 1	Q19	L - 3	Q422	P - 2	RV702	D - 7		
D1	K - 7			Q20	L - 3	Q423	P - 1	RV703	D - 6		
D3	J - 4	IC1	J - 7	Q21	L - 3	Q424	O - 1	RV704	M - 6		
D4	J - 4	IC2	J - 6	Q22	K - 4	Q425	N - 1	RV706	E - 7		
D5	K - 4	IC3	J - 5	Q23	L - 4	Q426	O - 2	RV707	E - 7		
D6	K - 4	IC4	K - 3	Q24	L - 5	Q427	O - 6	RV708	D - 5		
D7	L - 2	IC5	M - 4	Q25	M - 5	Q430	P - 6	RV716	D - 3		
D8	L - 3	IC6	M - 7	Q26	L - 5	Q497	O - 7	RV717	D - 1		
D9	L - 3	IC7	L - 8	Q27	M - 5	Q517	N - 3	RV718	B - 1		
D10	L - 4	IC8	K - 8	Q28	L - 5	Q518	N - 3	RV813	C - 4		
D11	L - 6	IC9	L - 7	Q29	L - 6	Q519	M - 5	RV814	C - 2		
D12	L - 8	IC10	K - 6	Q30	M - 7	Q520	O - 3	RV815	B - 2		
D13	L - 8	IC11	L - 7	Q31	M - 8	Q521	O - 4	RV816	B - 2		
D14	L - 7	IC12	L - 6	Q32	K - 8	Q522	O - 5	RV1100	G - 7		
D15	K - 8	IC13	K - 5	Q33	L - 8	Q523	O - 5				
D16	I - 7	IC14	K - 2	Q36	K - 2	Q603	A - 6	TH701	M - 8		
D17	L - 2	IC15	K - 4	Q37	J - 7	Q604	B - 3	TH1001	O - 4		
D201	G - 7	IC16	I - 7	Q38	K - 7	Q606	A - 5	TH1002	C - 2		
D204	G - 3	IC17	I - 8	Q40	J - 8	Q701	E - 8	TH1003	N - 2		
D205	G - 3	IC201	F - 7	Q41	K - 8	Q702	E - 8	TH1004	C - 1		
D206	G - 4	IC202	F - 4	Q42	K - 8	Q703	C - 6				
D207	G - 4	IC203	F - 3	Q43	M - 2	Q704	C - 5	TP1	J - 7		
D208	I - 2	IC204	H - 3	Q44	L - 1	Q705	C - 5	TP3	J - 5		
D209	I - 3	IC205	I - 4	Q45	L - 1	Q706	E - 7	TP4	K - 8		
D210	I - 3	IC206	H - 7	Q46	L - 1	Q707	E - 6	TP6	M - 1		
D211	H - 4	IC207	H - 8	Q47	L - 1	Q708	D - 7	TP7	K - 5		
D212	H - 6	IC208	G - 8	Q48	L - 2	Q711	C - 1	TP8	L - 5		
D213	H - 7	IC209	H - 7	Q201	F - 8	Q712	B - 1	TP9	K - 4		
D214	H - 7	IC210	G - 5	Q205	F - 7	Q713	E - 5	TP10	L - 2		
D215	H - 7	IC211	H - 6	Q206	F - 5	Q714	D - 1	TP11	K - 4		
D401	O - 7	IC212	H - 6	Q207	G - 4	Q716	E - 3	TP12	L - 4		
D402	O - 7	IC213	G - 4	Q208	G - 3	Q717	E - 2	TP13	K - 5		
D403	N - 6	IC214	H - 2	Q209	G - 2	Q718	E - 2	TP201	F - 7		
D404	P - 7	IC215	F - 3	Q210	G - 2	Q719	F - 2	TP203	F - 8		
D405	P - 5	IC401	O - 7	Q211	G - 2	Q720	D - 1	TP204	F - 4		
D406	P - 5	IC402	N - 6	Q212	G - 1	Q813	C - 3	TP205	F - 5		
D407	J - 4	IC403	P - 4	Q213	H - 1	Q814	C - 3	TP207	I - 5		
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D410	O - 1	IC406	J - 4	Q218	I - 2	Q816	D - 2	TP210	J - 2		
D601	B - 3	IC411	I - 6	Q219	I - 3	Q817	C - 2	TP211	G - 3		
D602	B - 3	IC412	P - 3	Q220	I - 3	Q818	B - 2	TP212	H - 4		
D701	D - 6	IC413	P - 3	Q221	H - 3	Q819	A - 2	TP213	C - 5		
D702	C - 6	IC414	N - 1	Q222	G - 4	Q1001	K - 6	TP214	H - 4		
D703	C - 5	IC508	N - 4	Q223	H - 4	Q1100	G - 6	TP215	H - 1		
D704	C - 1	IC509	O - 3	Q224	H - 5	Q1101	F - 6	TP216	H - 2		
D706	D - 1	IC510	O - 4	Q225	I - 5			TP401	P - 7		
D1002	P - 2	IC602	B - 7	Q226	H - 5	RV1	K - 6	TP402	N - 8		
D1003	P - 2	IC603	E - 8	Q227	I - 5	RV4	L - 2	TP403	N - 6		
D1004	P - 2	IC608	B - 6	Q228	H - 5	RV5	K - 3	TP404	P - 6		
D1005	O - 1	IC611	A - 5	Q229	I - 7	RV6	K - 4	TP408	O - 8		
D1006	E - 2	IC612	A - 7	Q230	H - 7	RV7	L - 4	TP409	P - 8		
D1007	E - 2	IC615	B - 4	Q231	H - 8	RV8	K - 7	TP410	P - 1		
D1008	E - 2	IC701	C - 7	Q232	G - 8	RV10	K - 1	TP411	O - 4		
D1009	C - 1	IC702	D - 5	Q233	H - 8	RV11	L - 1	TP415	N - 8		
D1010	D - 1	IC703	M - 7	Q236	G - 1	RV12	L - 2	TP417	N - 7		
		IC706	E - 5	Q239	G - 7	RV202	G - 5	TP506	O - 3		
DL201	F - 5	IC707	D - 6	Q240	F - 8	RV204	I - 2	TP507	M - 5		
DL401	P - 4	IC714	B - 1	Q241	G - 8	RV205	H - 2	TP601	B - 9		
DL402	P - 4	IC715	E - 3	Q242	F - 8	RV206	G - 4	TP635	A - 8		
DL503	M - 3	IC716	E - 3	Q243	J - 2	RV207	H - 4	TP606	A - 6		
DL601	A - 4	IC717	D - 1	Q244	J - 1	RV208	G - 8	TP701	E - 7		
DL701	E - 4	IC810	C - 4	Q245	I - 1	RV210	G - 1	TP702	B - 8		
DL702	D - 4	IC811	C - 2	Q246	I - 1	RV211	I - 2	TP703	C - 5		
DL802	C - 3	IC812	B - 2	Q247	I - 1	RV212	I - 1	TP704	C - 6		
				Q248	I - 2	RV401	O - 8	TP708	D - 6		
E1	K - 7	LV1	K - 4	Q401	P - 8	RV402	O - 8	TP709	D - 6		
E2	J - 5	LV201	G - 3	Q402	P - 7	RV403	O - 7	TP710	E - 6		
E3	J - 2	LV401	O - 8	Q403	P - 7	RV404	P - 8	TP711	D - 4		
E4	M - 4	LV402	P - 8	Q404	N - 7	RV405	P - 7	TP712	A - 1		
E201	G - 7	LV601	B - 5	Q405	N - 5	RV406	P - 5	TP715	C - 8		
E202	I - 4	LV701	D - 8	Q406	N - 6	RV408	N - 2	TP730	M - 8		
E203	J - 1	LV702	E - 8	Q407	O - 6	RV409	N - 2	TP806	D - 3		
E204	P - 3			Q408	P - 8	RV415	P - 3	TP807	C - 4		
E401	P - 8	Q1	K - 8	Q409	P - 7	RV416	N - 1				
E402	M - 6	Q6	J - 6	Q410	P - 7	RV512	N - 4				
E403	M - 1	Q7	K - 5	Q411	P - 5	RV513	O - 4				
E404	P - 2	Q8	K - 3	Q412	J - 4	RV514	O - 5				
E601	A - 7	Q9	K - 3	Q413	M - 2	RV515	N - 5				
E701	C - 8	Q10	J - 3	Q414	N - 2	RV516	N - 7				

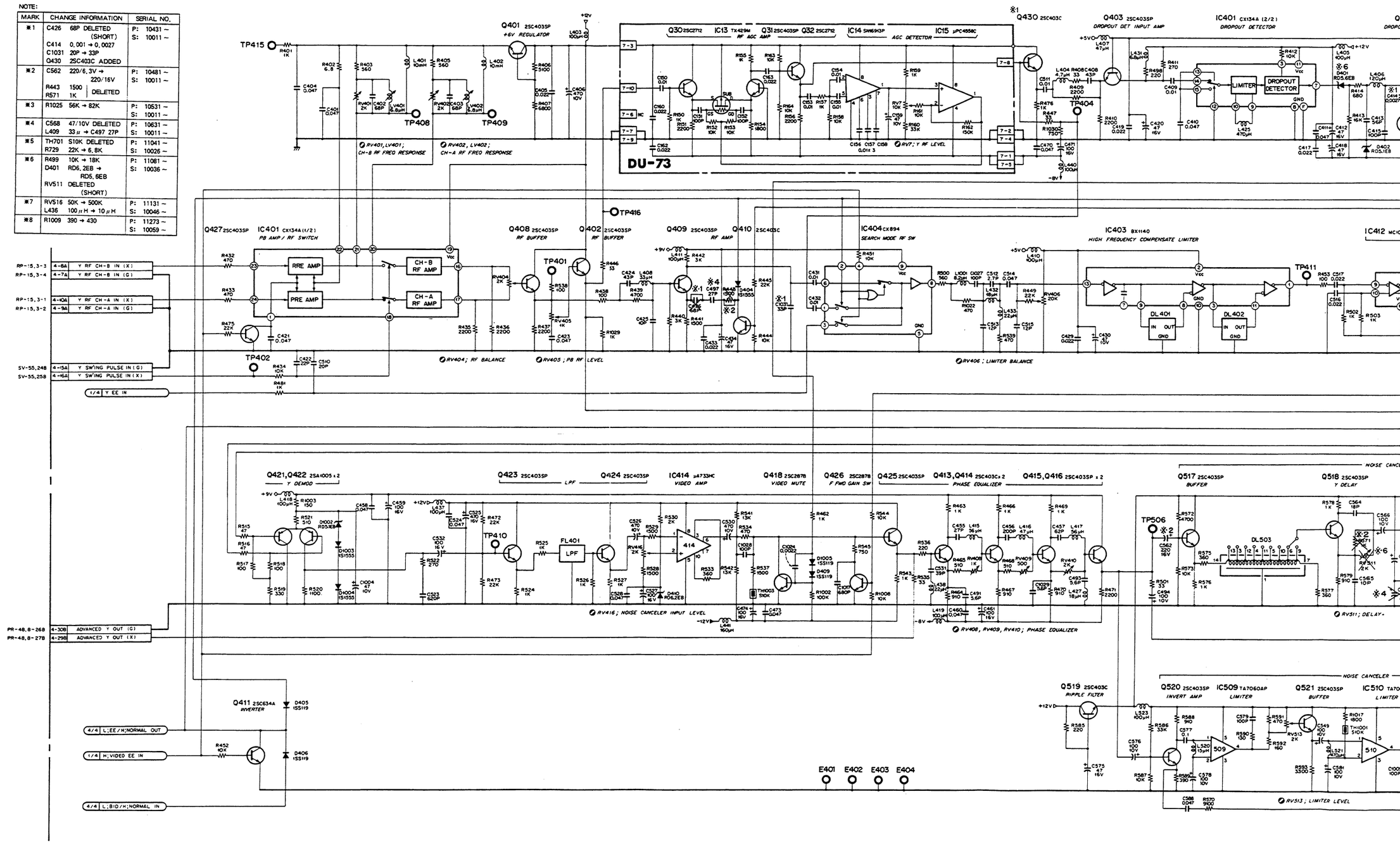


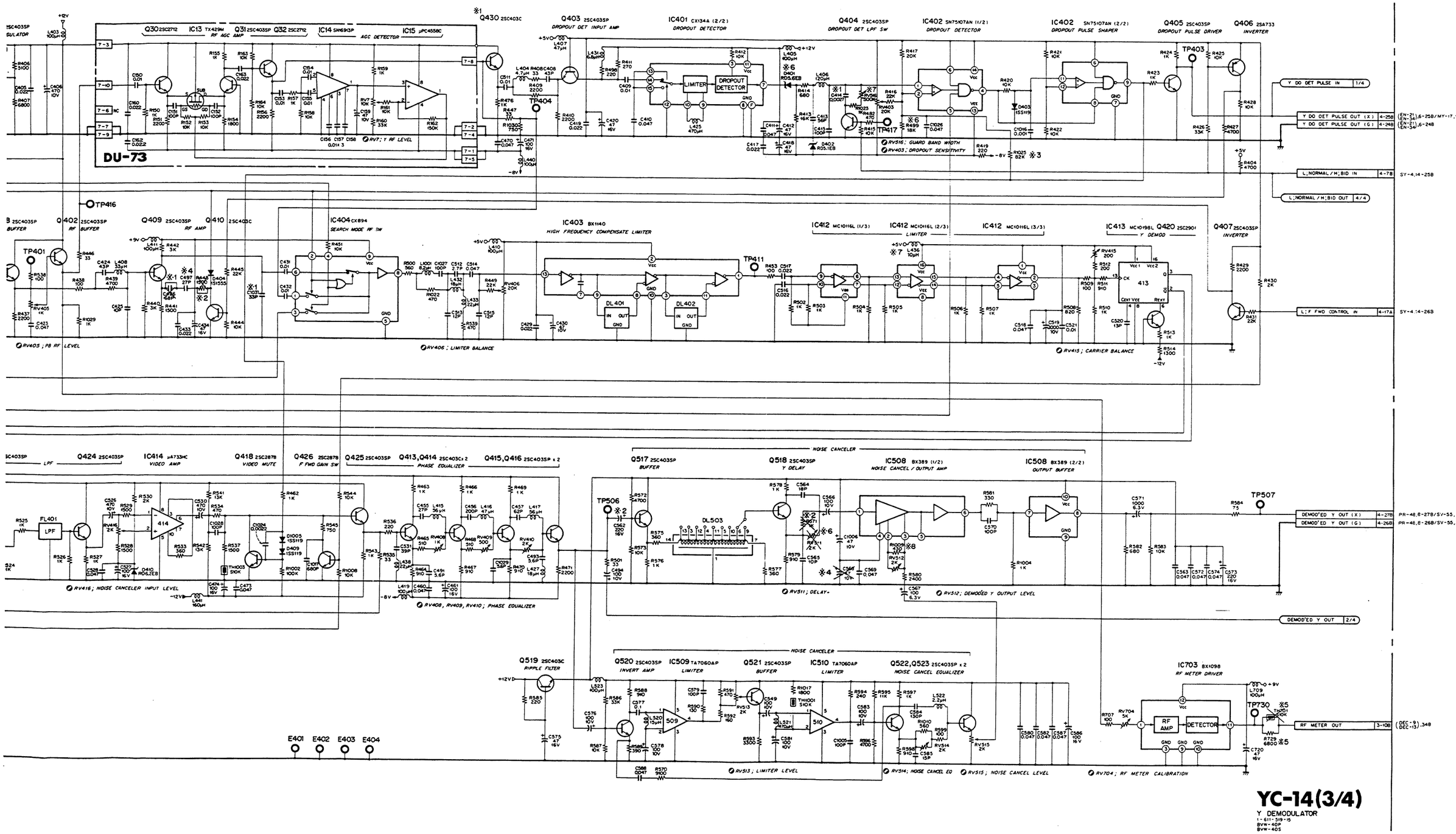
18-58 (b)

YC-14 (3/4) (Y DEMODULATOR) S/N 10391 TO 11272

NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	C426 68P DELETED (SHORT) C414 0.001 → 0.0027 C1031 20P → 33P Q430 2SC4033C ADDED	P: 10431 ~ S: 10011 ~
※2	C562 220/6.3V → 220/16V R443 1500 | DELETED R571 1K | DELETED	P: 10481 ~ S: 10011 ~
※3	R1025 56K → 82K	P: 10531 ~ S: 10011 ~
※4	C568 47/10V DELETED L409 33μ → C497 27P	P: 10631 ~ S: 10011 ~
※5	TH701 S10K DELETED R729 22K → 6.8K	P: 11041 ~ S: 10026 ~
※6	R499 10K → 18K D401 RD6.2EB → RD5.6EB RV511 DELETED (SHORT)	P: 11081 ~ S: 10036 ~
※7	RV516 50K → 500K L436 100μH → 10μH	P: 11131 ~ S: 10046 ~
※8	R1009 390 → 430	P: 11273 ~ S: 10059 ~





YC-14(3/4)

Y DEMODULATOR

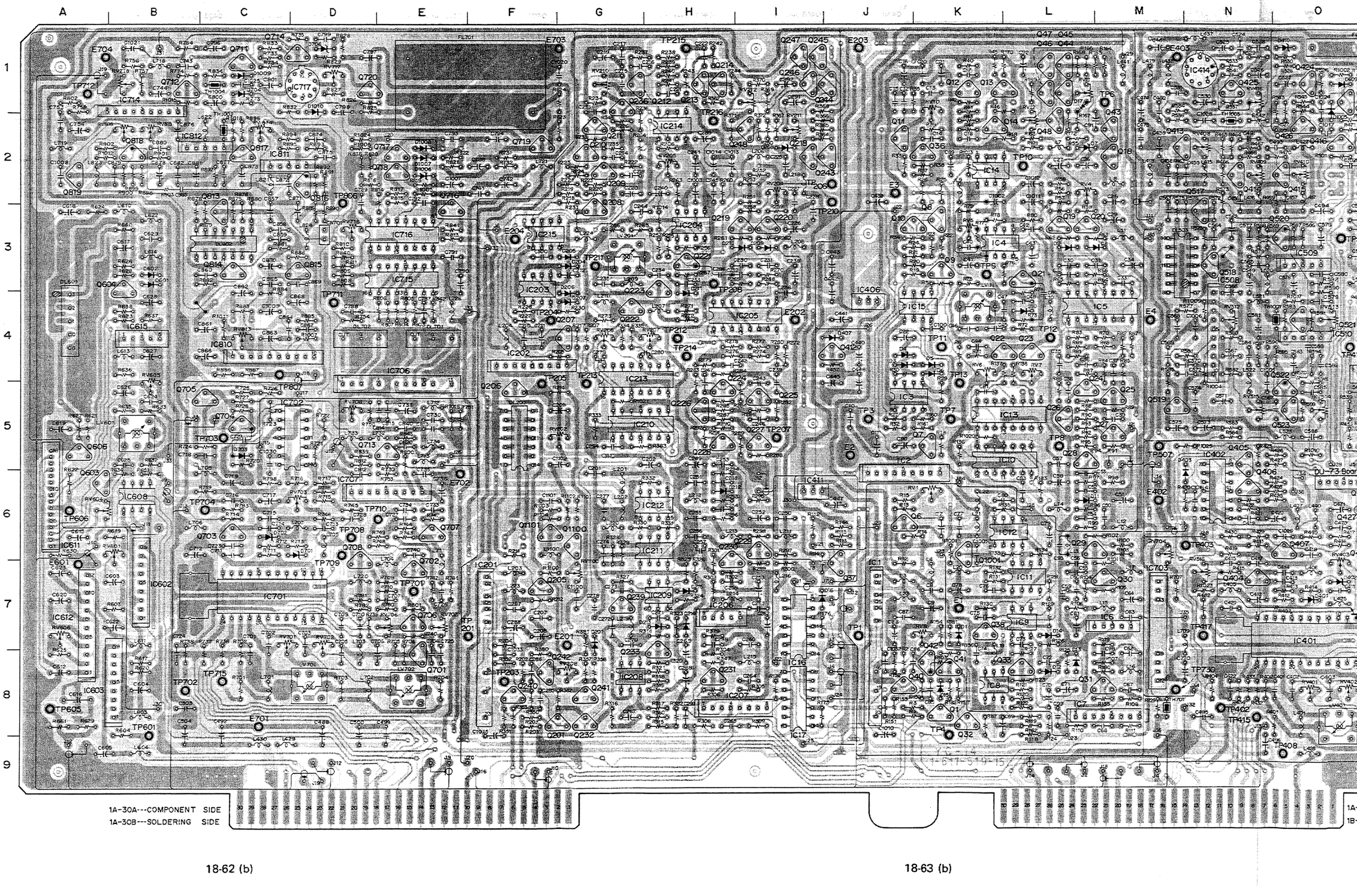
1-611-319-15

BVW-40P

BVW-40S

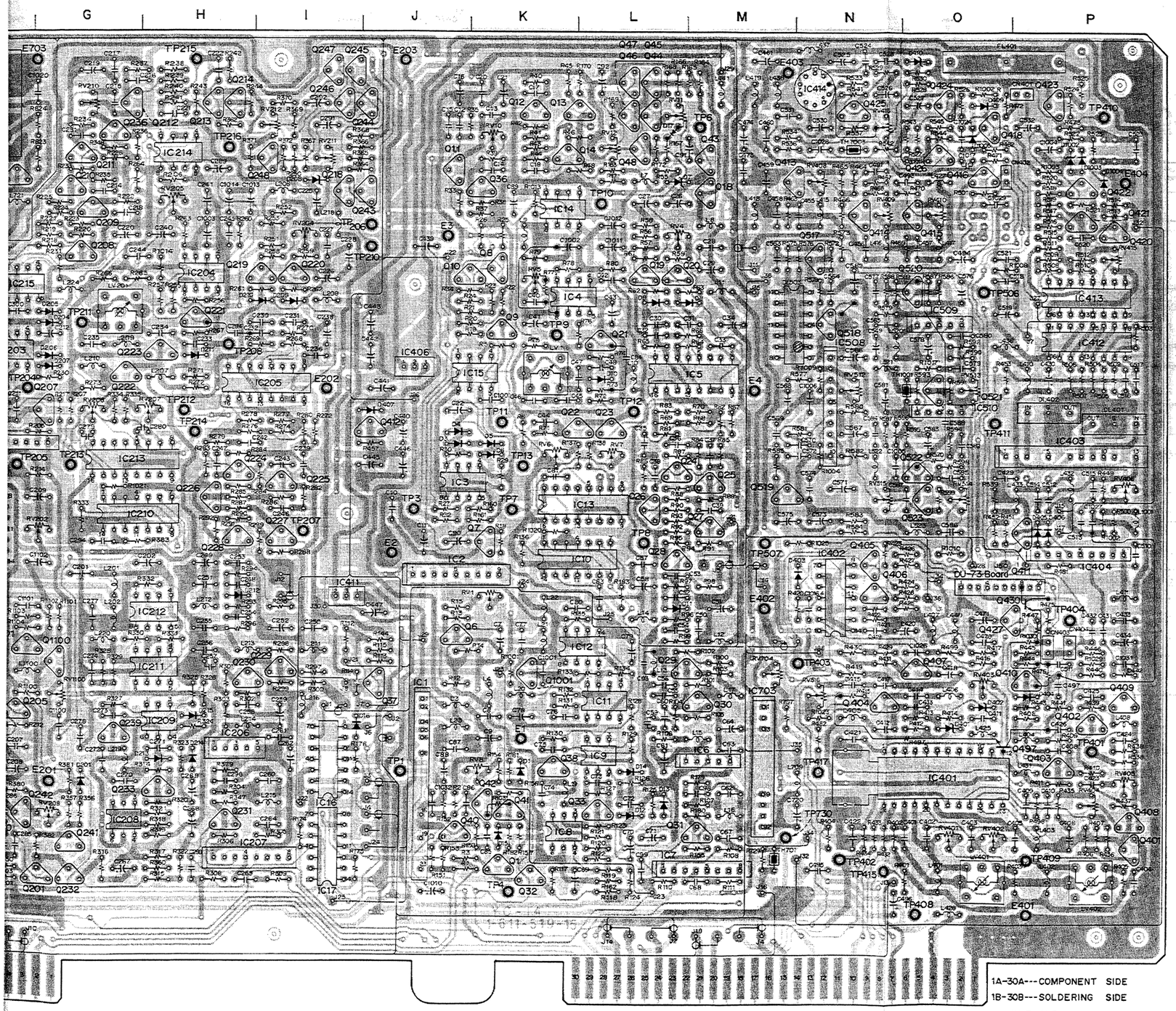
YC-14 YC-14

YC-14 (Y/C MODULATOR AND DEMODULATOR) S/N 10391 TO 11272

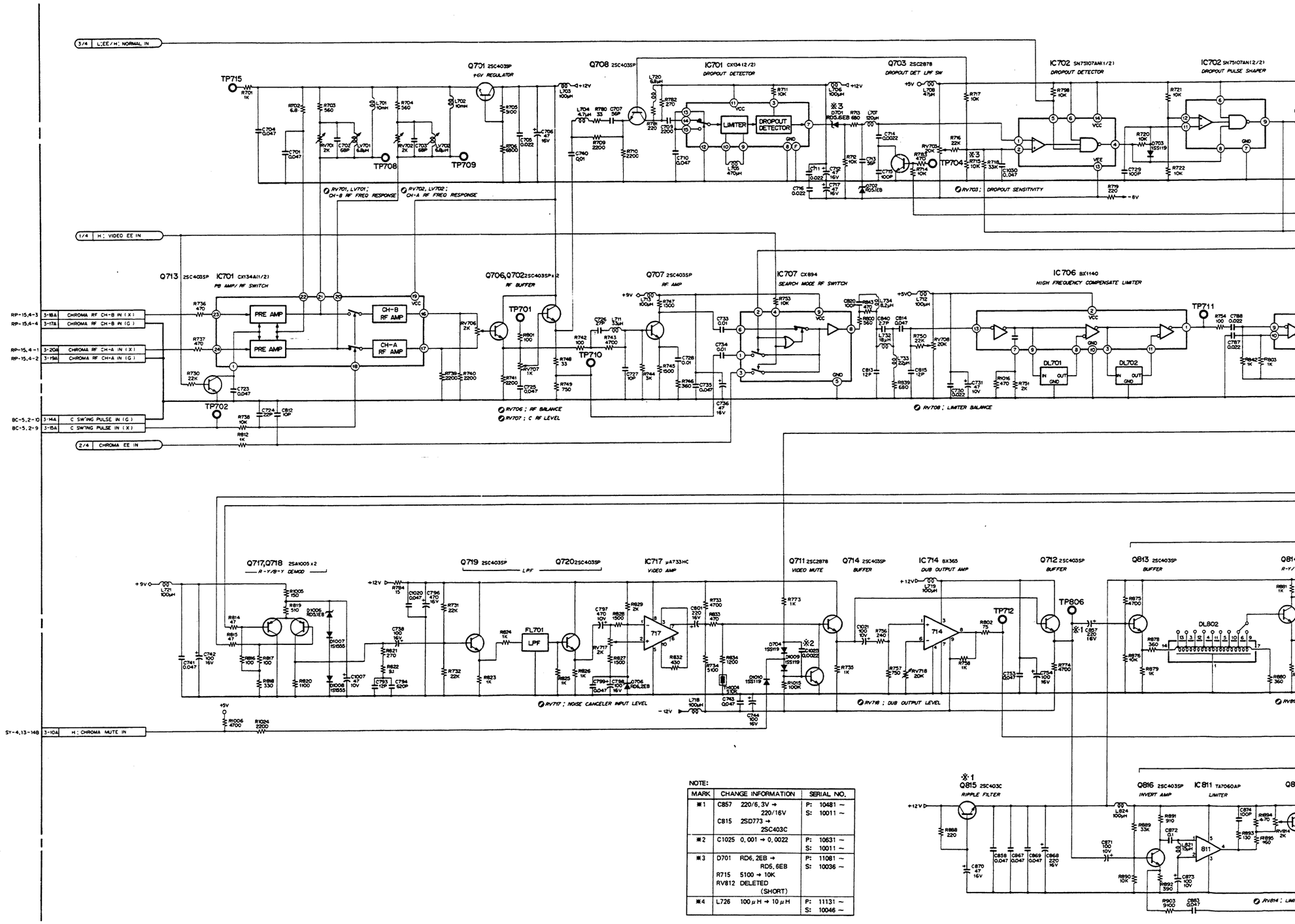


18-62 (b)

18-63 (b)

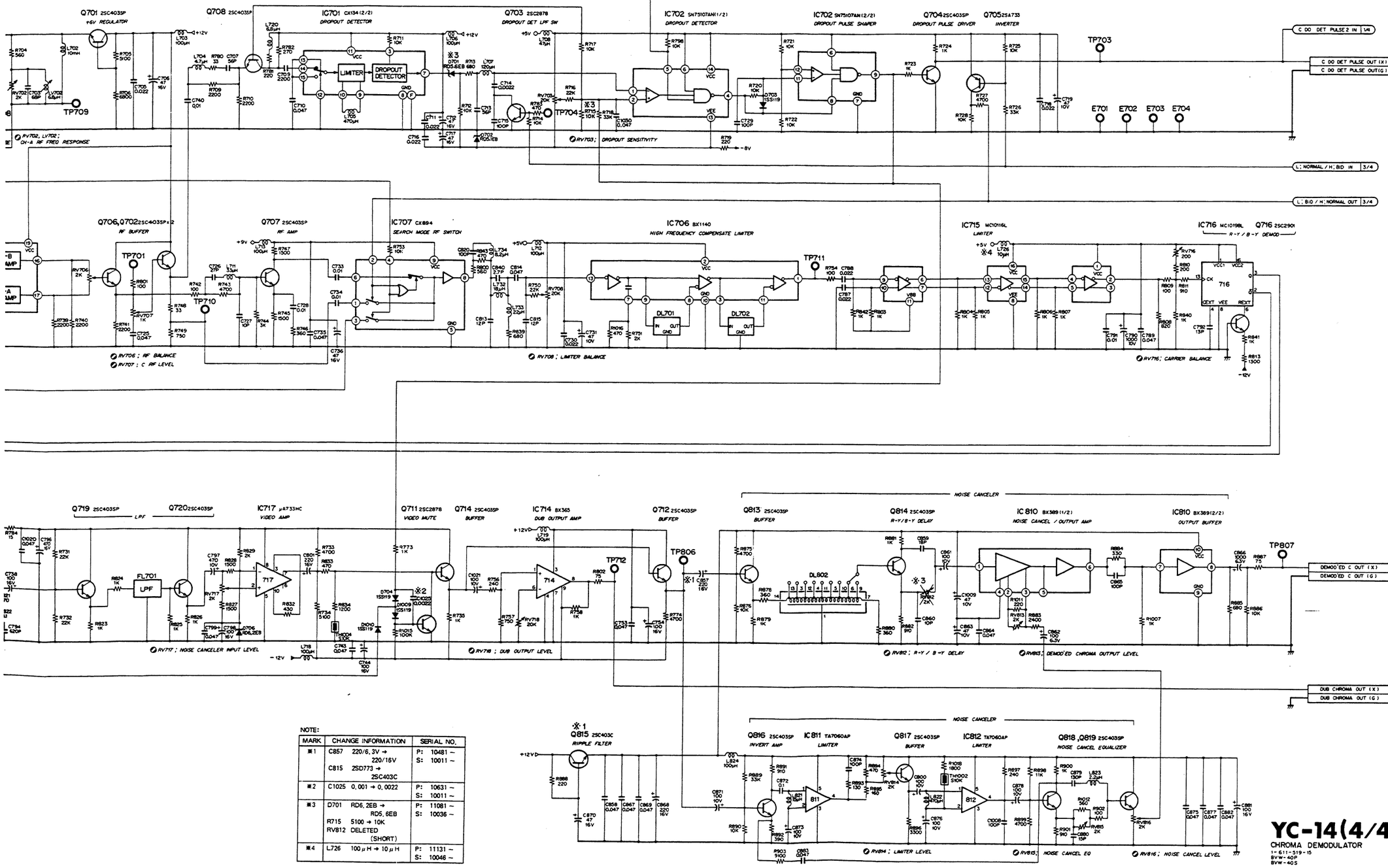

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YC-14 (4/4) (CHROMA DEMODULATOR) S/N 10391 TO 11272



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	C857 220/6.3V → 220/16V C815 2SD773 → 2SC403C	P: 10481 ~ S: 10011 ~
※2	C1025 0.001 → 0.0022	P: 10631 ~ S: 10011 ~
※3	D701 RD6.2EB → RD5.6EB R715 5100 → 10K RV812 DELETED (SHORT)	P: 11081 ~ S: 10036 ~
※4	L726 100μH → 10μH	P: 11131 ~ S: 10046 ~



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	C857 220/6.3V → 220/16V	P: 10481 ~ S: 10011 ~
	C815 2SD773 → 2SC403C	
※2	C1025 0.001 → 0.0022	P: 10631 ~ S: 10011 ~
※3	D701 RD6.2EB → RD5.6EB	P: 11081 ~ S: 10036 ~
	R715 5100 → 10K	
	RV812 DELETED (SHORT)	
※4	L726 100μH → 10μH	P: 11131 ~ S: 10046 ~

YC-14(4/4)

CHROMA DEMODULATOR

1-611-519-15

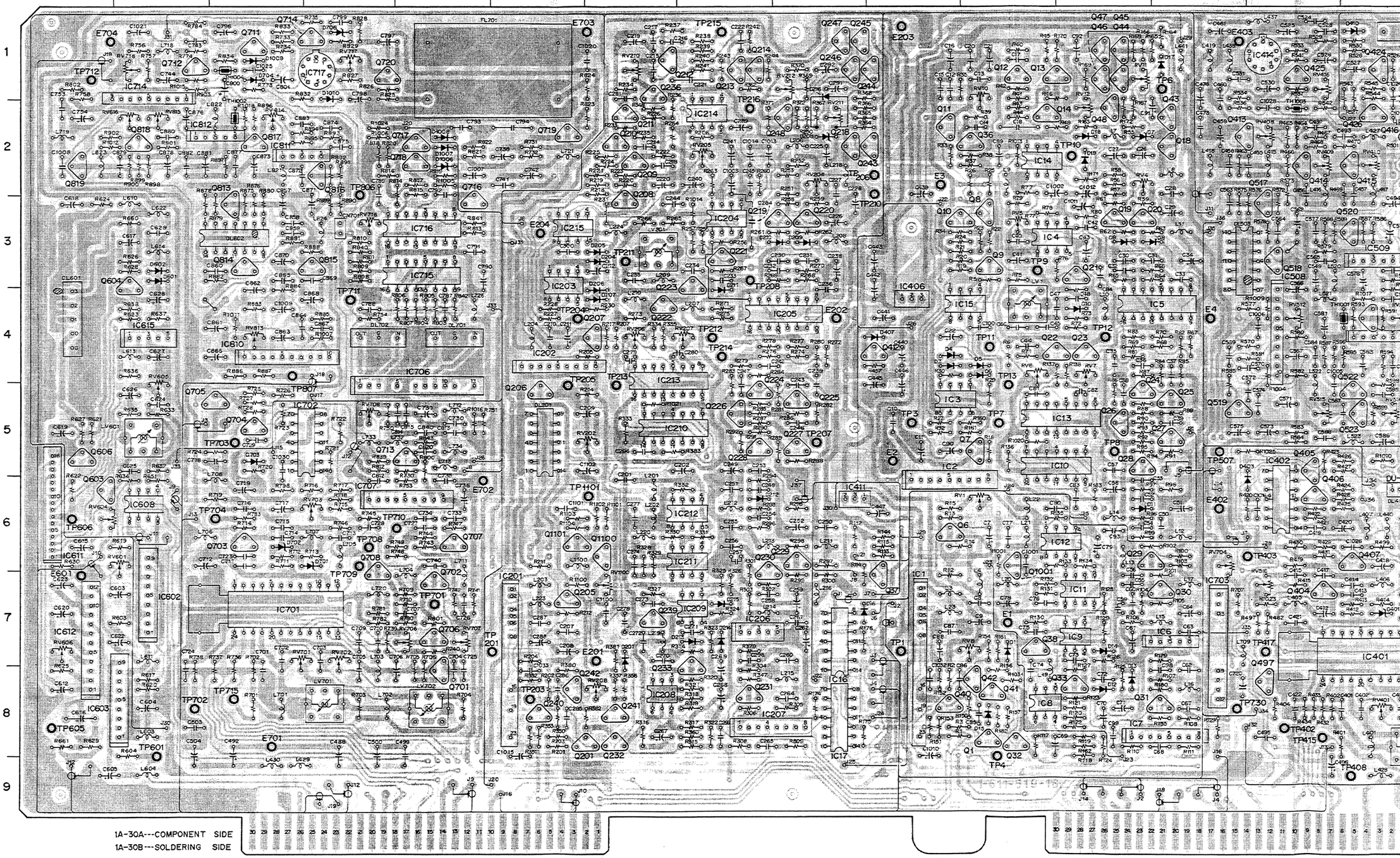
BVW-40P

BVW-40S

YC-14 YC-14

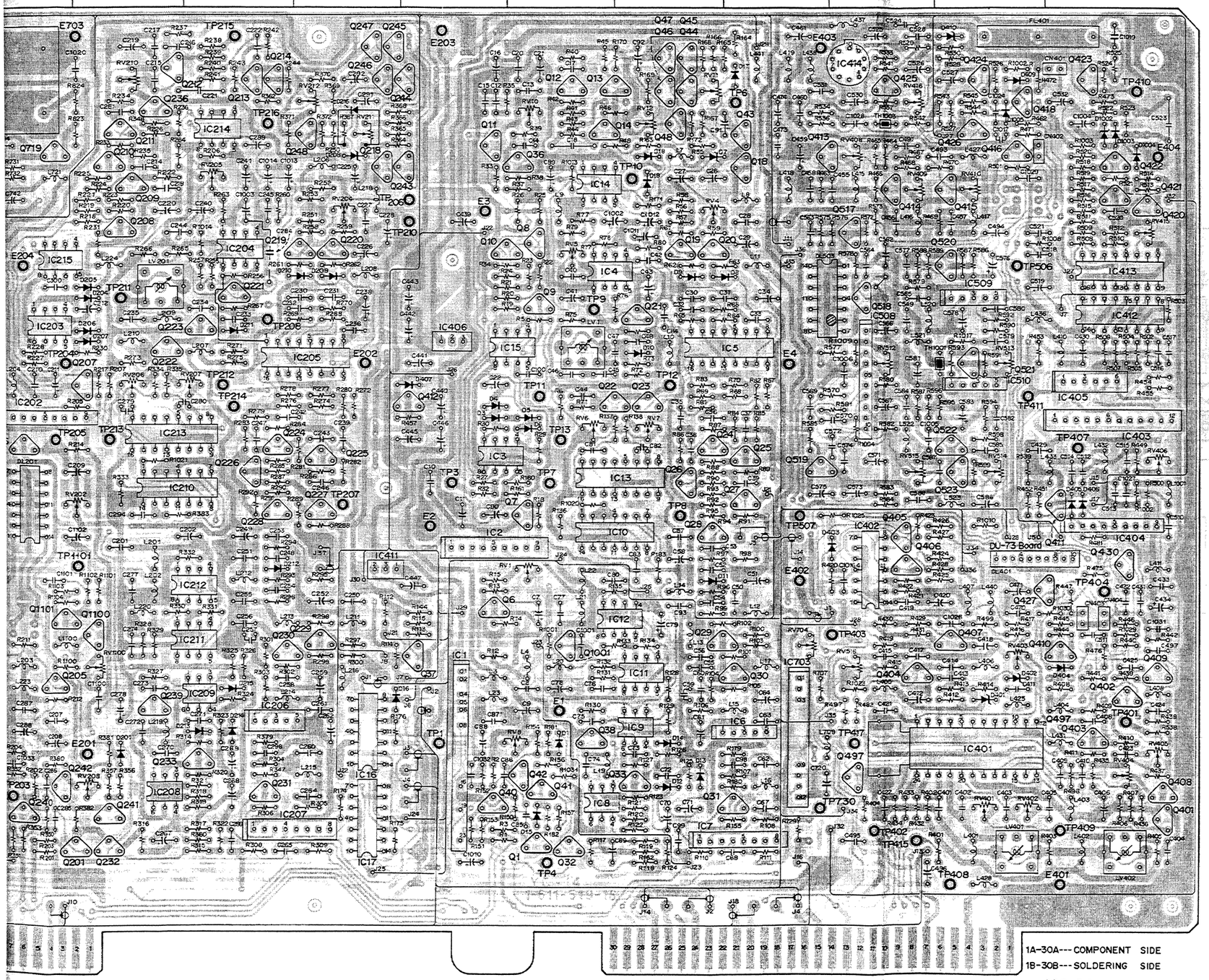
YC-14 (Y/C MODULATOR AND DEMODULATOR)

S/N 11273 AND LATER (P)
S/N 10061 AND LATER (S)



18-42 (c)

18-43 (c)



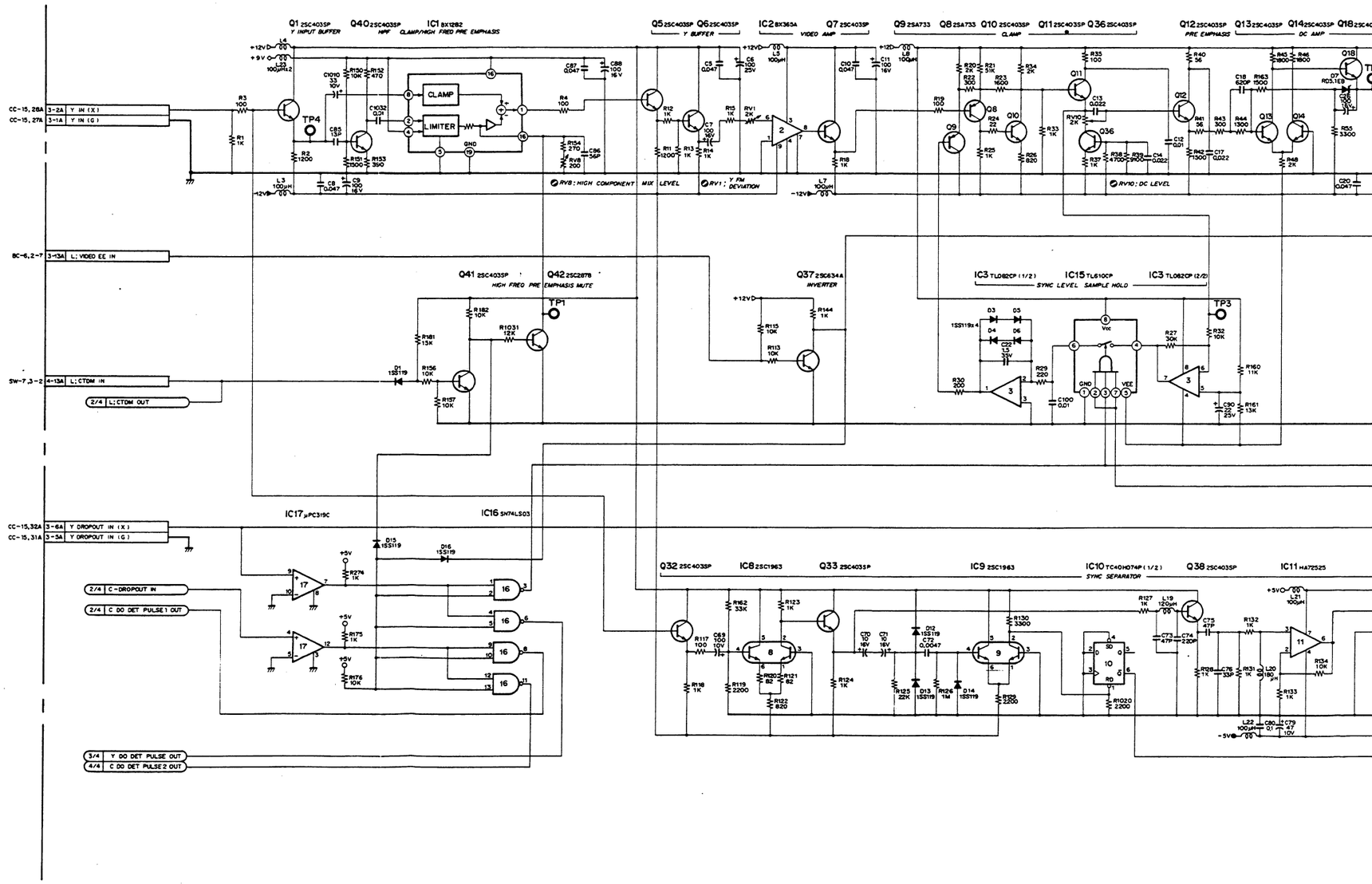
18-43 (c)

CN401	P - 1	E403	M - 1	Q6	J - 6	Q410	P - 7	RV512	N - 4		
CN402	O - 2	E404	P - 2	Q7	K - 3	Q411	P - 5	RV513	O - 4		
CN403	P - 6	E601	A - 7	Q8	K - 3	Q412	J - 4	RV514	O - 5		
CN404	P - 6	E701	C - 8	Q9	K - 3	Q413	M - 2	RV515	N - 5		
CN701	D - 3	E702	E - 6	Q10	J - 3	Q414	N - 2	RV516	N - 7		
		E703	F - 1	Q11	J - 2	Q415	O - 2	RV601	B - 6		
D1	K - 7	E704	A - 1	Q12	K - 1	Q416	O - 2	RV604	A - 6		
D3	J - 4			Q13	K - 1	Q418	O - 1	RV605	B - 5		
D4	J - 4	FL401	O - 1	Q14	K - 2	Q420	P - 2	RV606	A - 7		
D5	K - 4	FL701	E - 1	Q18	M - 2	Q421	P - 2	RV701	C - 7		
D6	K - 4			Q19	L - 3	Q422	P - 2	RV702	D - 7		
D7	L - 3	IC1	J - 7	Q20	L - 3	Q423	P - 1	RV703	D - 6		
D8	L - 3	IC2	J - 6	Q21	L - 3	Q424	O - 1	RV704	M - 6		
D9	L - 3	IC3	J - 5	Q22	K - 4	Q425	N - 1	RV706	E - 7		
D10	L - 4	IC4	K - 3	Q23	L - 4	Q426	O - 2	RV707	E - 7		
D11	L - 6	IC5	M - 4	Q24	L - 5	Q427	O - 6	RV708	D - 5		
D12	L - 8	IC6	M - 7	Q25	M - 5	Q430	P - 6	RV716	D - 3		
D13	L - 8	IC7	L - 8	Q26	L - 5	Q497	N - 7	RV717	D - 1		
D14	L - 7	IC8	K - 8	Q27	M - 5	Q517	N - 3	RV718	B - 1		
D15	K - 8	IC9	L - 7	Q28	L - 5	Q518	N - 3	RV813	C - 4		
D16	I - 7	IC10	K - 5	Q29	L - 6	Q519	M - 5	RV814	C - 2		
D17	M - 1	IC11	L - 7	Q30	M - 7	Q520	O - 3	RV815	B - 2		
D18	L - 2	IC12	L - 6	Q31	M - 8	Q521	O - 4	RV816	B - 2		
D19	L - 2	IC13	K - 5	Q32	K - 8	Q522	O - 5	RV1100	G - 7		
D201	G - 7	IC14	K - 2	Q33	L - 8	Q523	O - 5				
D204	G - 3	IC15	K - 1	Q36	K - 2	Q603	A - 6	TH1001	O - 4		
D205	G - 3	IC16	I - 7	Q37	J - 7	Q604	B - 3	TH1002	C - 2		
D206	G - 4	IC17	I - 8	Q38	K - 7	Q606	A - 5	TH1003	N - 2		
D207	G - 4	IC201	F - 7	Q40	J - 8	Q701	E - 8	TH1004	C - 1		
D208	I - 2	IC202	F - 4	Q41	K - 8	Q702	E - 7				
D209	I - 3	IC203	F - 3	Q42	K - 8	Q703	C - 6	TP1	J - 7		
D210	I - 3	IC204	H - 3	Q43	M - 2	Q704	C - 5	TP3	I - 5		
D211	H - 4	IC205	I - 4	Q44	L - 1	Q705	C - 5	TP4	K - 8		
D212	H - 6	IC206	H - 7	Q45	L - 1	Q706	E - 7	TP6	M - 1		
D213	H - 7	IC207	H - 8	Q46	L - 1	Q707	E - 6	TP7	K - 5		
D214	H - 7	IC208	G - 8	Q47	L - 1	Q708	D - 7	TP8	L - 5		
D215	H - 7	IC209	H - 7	Q48	L - 2	Q711	C - 1	TP9	K - 4		
D216	I - 2	IC210	G - 5	Q201	F - 8	Q712	B - 1	TP10	L - 2		
D401	O - 7	IC211	H - 6	Q205	F - 7	Q713	B - 5	TP11	K - 4		
D402	O - 7	IC212	H - 6	Q206	F - 5	Q714	D - 1	TP12	L - 4		
D403	N - 6	IC213	G - 4	Q207	G - 4	Q716	E - 3	TP13	K - 5		
D404	P - 7	IC214	H - 2	Q208	G - 3	Q717	E - 2	TP201	F - 7		
D405	P - 5	IC215	F - 3	Q209	G - 2	Q718	E - 2	TP203	F - 8		
D406	P - 5	IC401	O - 7	Q210	G - 2	Q719	F - 2	TP204	F - 4		
D407	J - 4	IC402	N - 6	Q211	G - 2	Q720	D - 1	TP205	F - 5		
D409	O - 1	IC403	P - 4	Q212	G - 1	Q813	C - 3	TP207	I - 5		
D410	O - 1	IC404	P - 5	Q213	H - 1	Q814	C - 3	TP208	H - 3		
D601	B - 3	IC405	P - 4	Q214	H - 1	Q815	D - 3	TP210	J - 2		
D602	B - 3	IC406	J - 4	Q218	I - 2	Q816	D - 2	TP211	G - 3		
D701	D - 6	IC411	I - 6	Q219	I - 3	Q817	C - 2	TP212	H - 4		
D702	C - 5	IC412	P - 3	Q220	I - 3	Q818	B - 2	TP213	G - 5		
D703	C - 5	IC413	P - 3	Q221	H - 3	Q819	A - 2	TP214	H - 4		
D704	C - 1	IC414	N - 1	Q222	G - 4	Q1001	K - 6	TP215	H - 1		
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D1008	E - 2	IC612	A - 7	Q230	H - 7	RV7	L - 4	TP409	P - 8		
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D1010	D - 1	IC701	C - 7	Q232	G - 8	RV10	K - 1	TP411	O - 4		
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DL201	F - 5	IC703	M - 7	Q236	G - 1	RV12	L - 2	TP417	N - 7		
DL401	P - 1	IC706	E - 5	Q238	G - 7	RV202	G - 5	TP506	O - 3		
DL402	P - 4	IC707	D - 6	Q240	F - 8	RV204	I - 2	TP507	M - 5		
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DL701	E - 4	IC716	E - 3	Q243	J - 2	RV207	H - 4	TP636	A - 6		
DL702	D - 4	IC717	D - 1	Q244	J - 1	RV208	G - 8	TP701	E - 7		
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E1	K - 7	IC812	B - 2	Q247	I - 1	RV212	I - 1	TP704	C - 6		
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E202	I - 4	LV601	B - 5	Q405	N - 5	RV405	P - 7	TP712	A - 1		
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E204	F - 3	LV702	E - 8	Q407	O - 6	RV408	N - 2	TP730	M - 8		
E401	P - 8			Q408	P - 8	RV409	N - 2	TP806	D - 3		
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						RV416	N - 1	TP1101	F - 6		

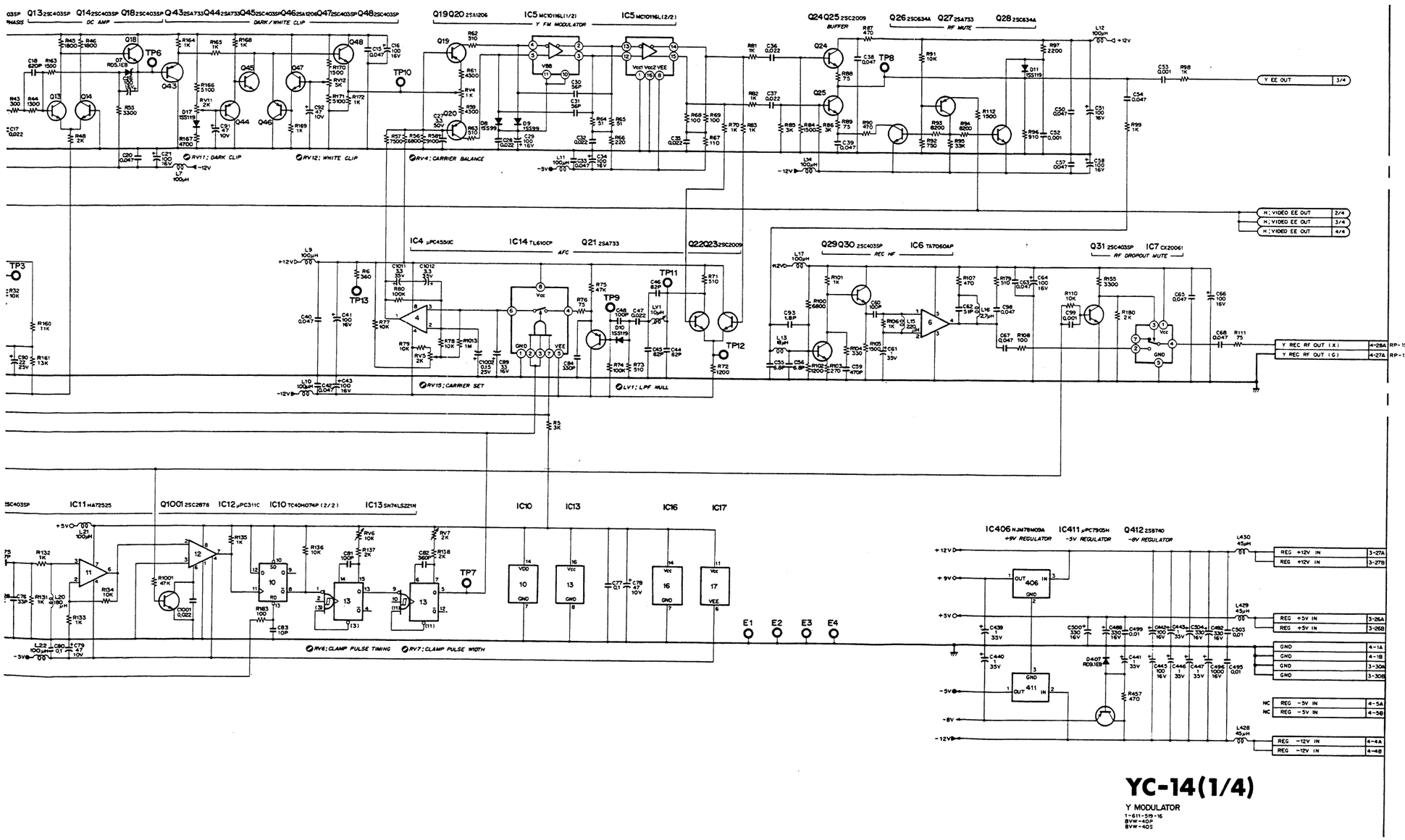
18-44 (c)

YC-14 (1/4) (Y MODULATOR)

S/N 11273 AND LATER (P)
S/N 10061 AND LATER (S)



YC-14 (1/4) YC-14 (1/4)



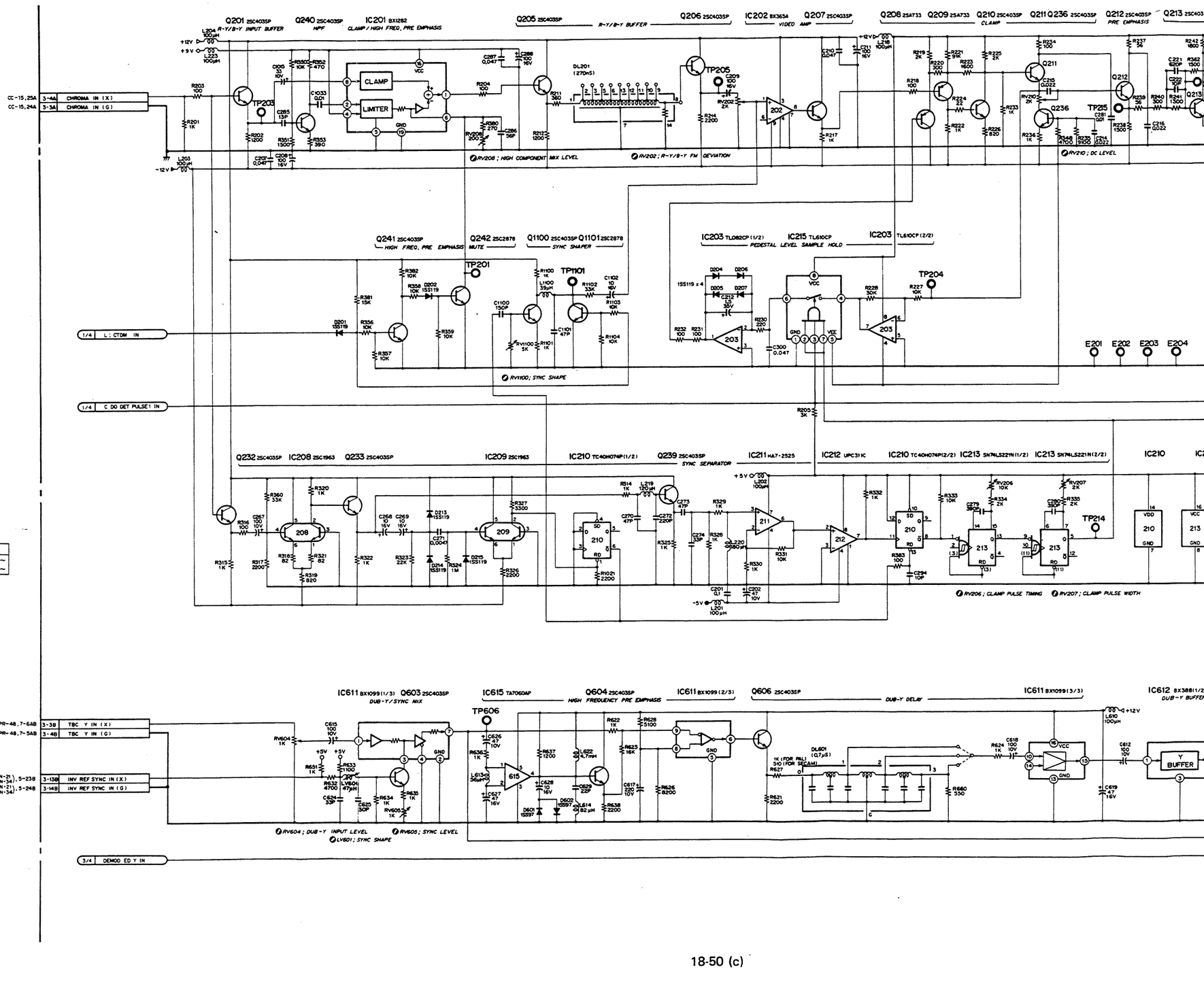
YC-14(1/4)

Y MODULATOR

1-611-519-16
BVW-40P
BVW-40S

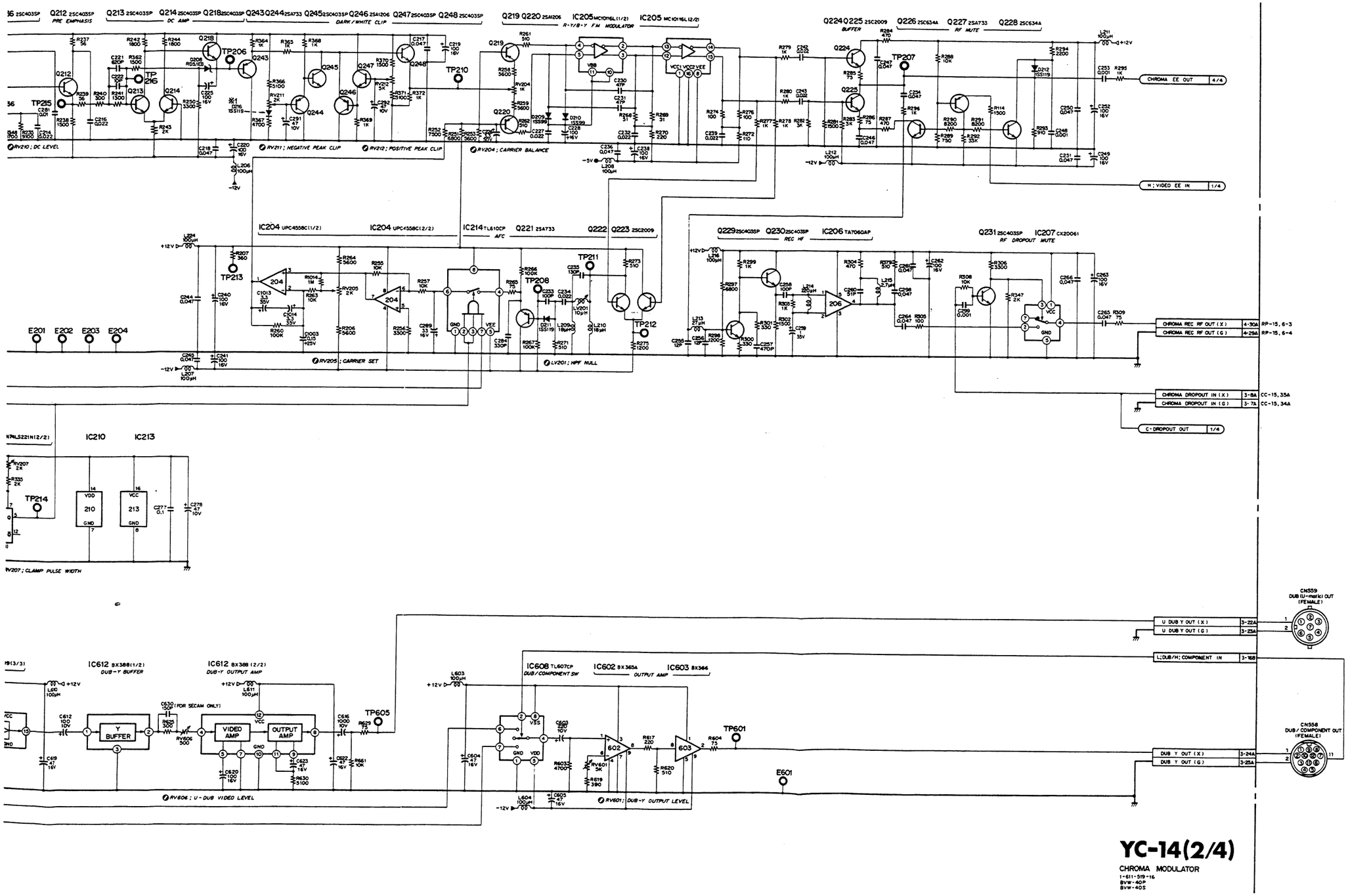
YC-14 (2/4) (CHROMA MODULATOR)

S/N 11273 AND LATER (P)
S/N 10061 AND LATER (S)



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	D216 1SS119 ADDED	P: 11482 ~ S: 10062 ~



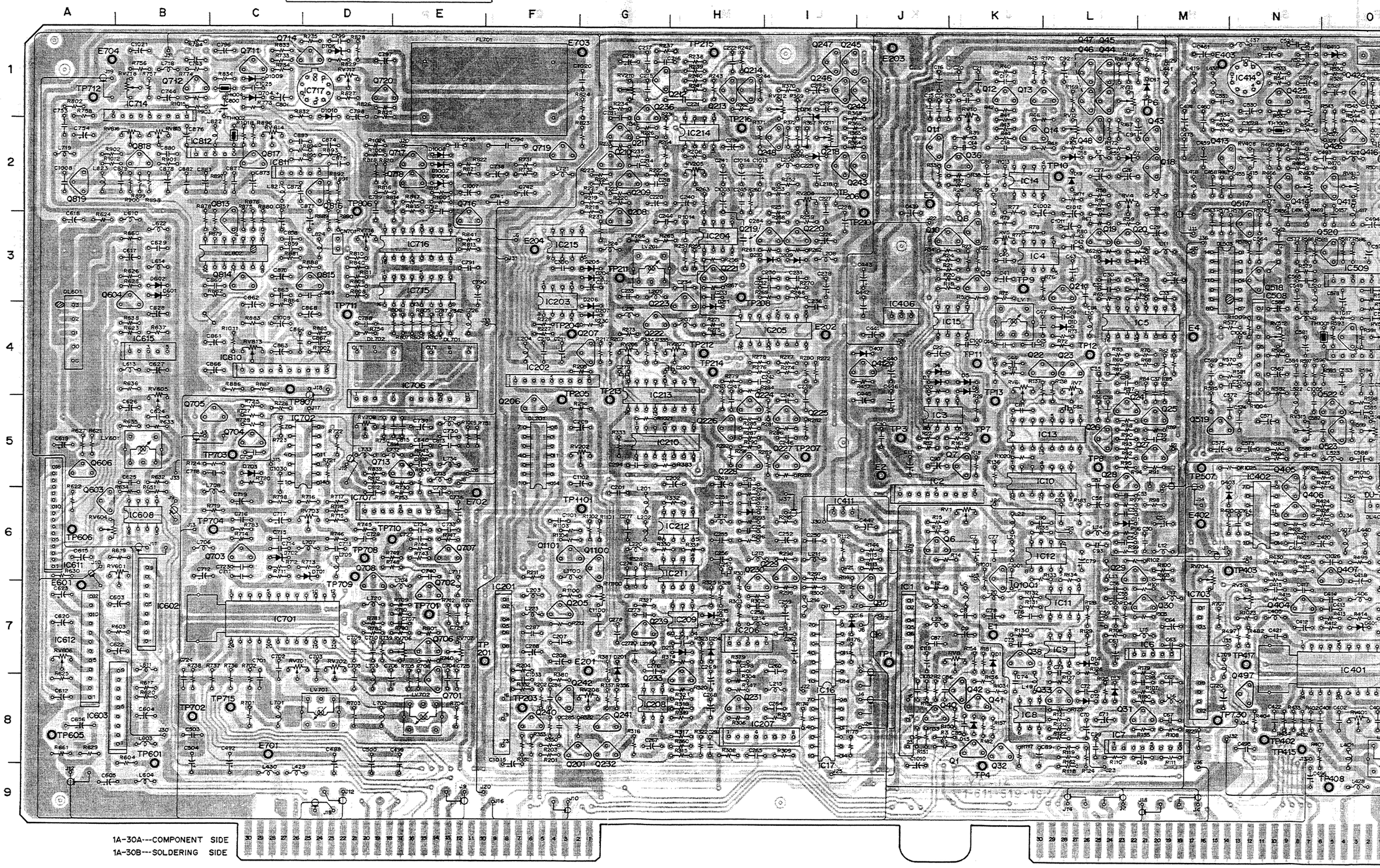
YC-14(2/4)

CHROMA MODULATOR

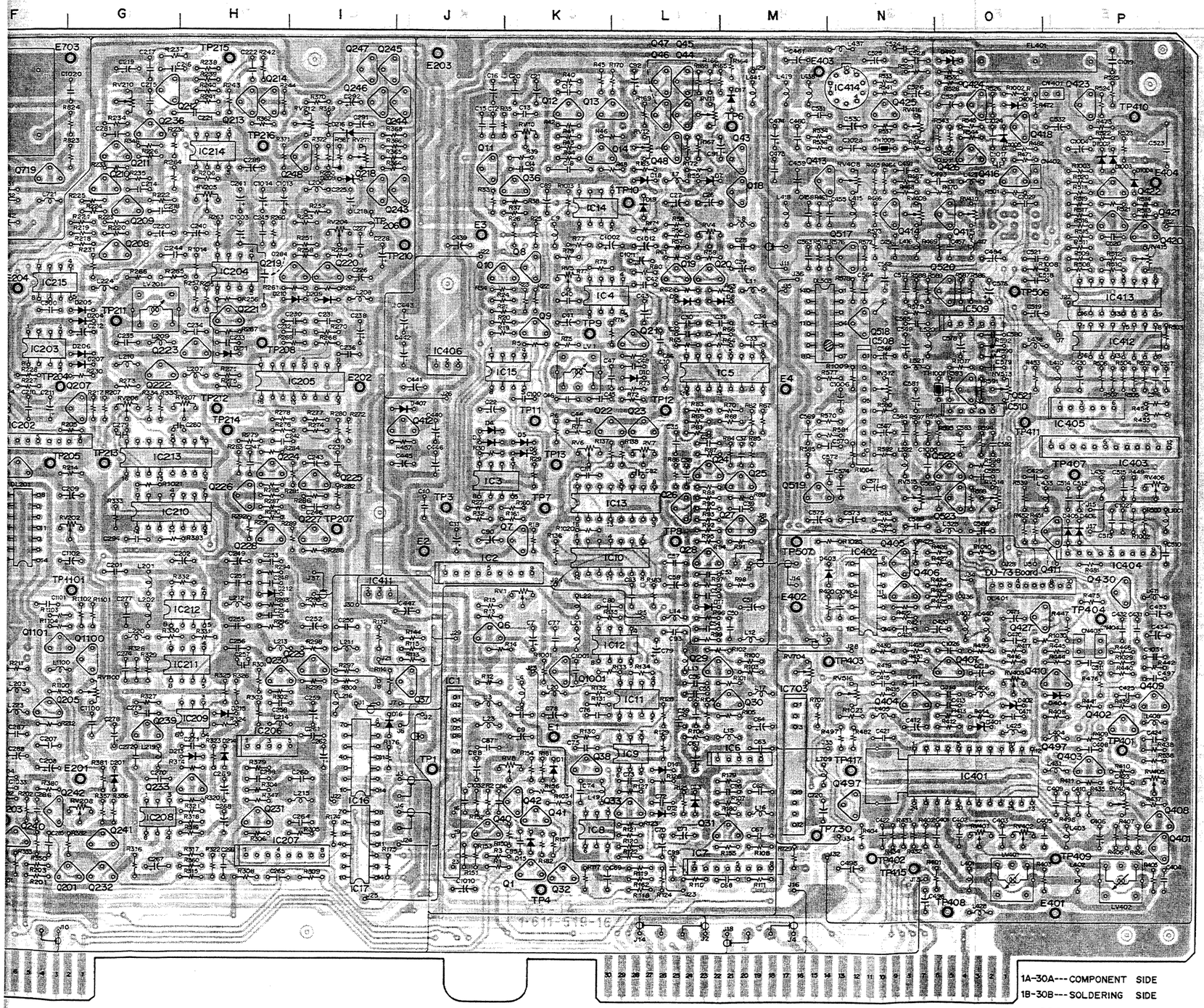
1-611-319-16
BVW-40P
BVW-40S

YC-14 (Y/C MODULATOR AND DEMODULATOR)

S/N 11273 AND LATER (P)
S/N 10061 AND LATER (S)



YC-14

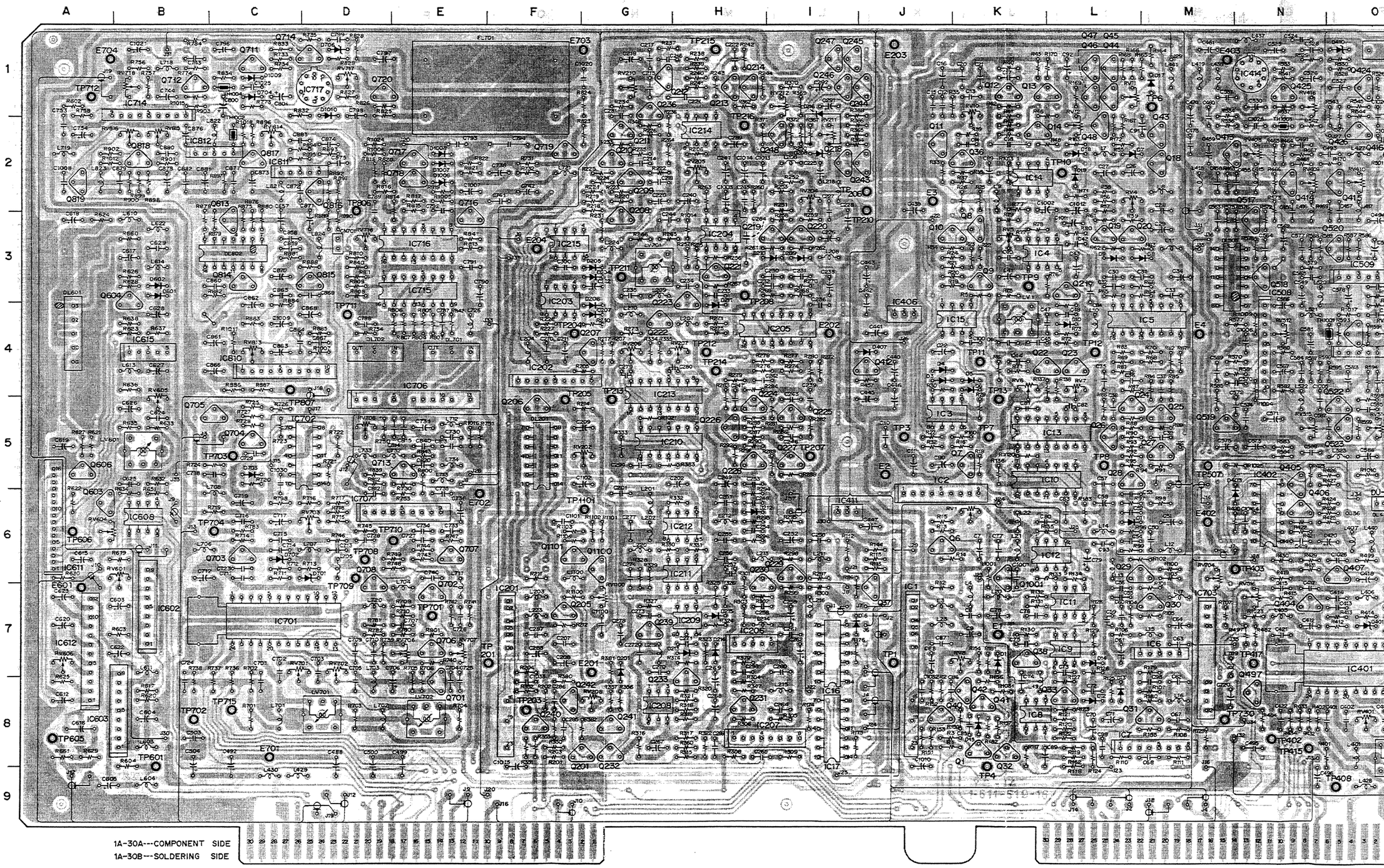


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CN402	O - 2	E404	P - 2	Q7	K - 5	Q411	P - 5	RV513	O - 4		
CN403	P - 6	E601	A - 7	Q8	K - 3	Q412	J - 4	RV514	O - 5		
CN404	P - 6	E701	C - 8	Q9	K - 3	Q413	M - 2	RV515	N - 5		
CN701	D - 3	E702	E - 6	Q10	J - 3	Q414	N - 2	RV516	N - 7		
		E703	F - 1	Q11	J - 2	Q415	O - 2	RV601	B - 6		
D1	K - 7	E704	A - 1	Q12	K - 1	Q416	O - 2	RV601	A - 6		
D3	J - 4			Q13	K - 1	Q418	O - 1	RV605	B - 5		
D4	J - 4	FL401	O - 1	Q14	K - 2	Q420	P - 2	RV606	A - 7		
D5	K - 4	FL701	E - 1	Q18	M - 2	Q421	P - 2	RV701	C - 7		
D6	K - 4			Q19	L - 3	Q422	P - 2	RV702	D - 7		
D7	L - 2	IC1	J - 7	Q20	L - 3	Q423	P - 1	RV703	D - 6		
D8	L - 3	IC2	J - 6	Q21	L - 3	Q424	O - 1	RV704	M - 6		
D9	L - 3	IC3	J - 5	Q22	K - 4	Q425	N - 1	RV706	E - 7		
D10	L - 4	IC4	K - 3	Q23	L - 4	Q426	O - 2	RV707	E - 7		
D11	L - 6	IC5	M - 4	Q24	L - 5	Q427	O - 6	RV708	D - 5		
D12	L - 8	IC6	M - 7	Q25	M - 5	Q430	P - 6	RV716	D - 3		
D13	L - 8	IC7	L - 8	Q26	L - 5	Q497	N - 7	RV717	D - 1		
D14	L - 7	IC8	K - 8	Q27	M - 5	Q517	N - 3	RV718	B - 1		
D15	K - 8	IC9	L - 7	Q28	L - 5	Q518	N - 3	RV813	C - 4		
D16	I - 7	IC10	K - 5	Q29	L - 6	Q519	M - 5	RV814	C - 2		
D17	M - 1	IC11	L - 7	Q30	M - 7	Q520	O - 3	RV815	B - 2		
D18	L - 2	IC12	L - 6	Q31	M - 8	Q521	O - 4	RV816	B - 2		
D19	L - 2	IC13	K - 5	Q32	K - 8	Q522	O - 5	RV1100	G - 7		
D201	G - 7	IC14	K - 2	Q33	L - 8	Q523	O - 3				
D204	G - 3	IC15	K - 4	Q36	K - 2	Q803	A - 6	TH1001	O - 4		
D205	G - 3	IC16	I - 7	Q37	J - 7	Q804	B - 3	TH1002	C - 2		
D206	G - 4	IC17	I - 8	Q38	K - 7	Q806	A - 5	TH1003	C - 1		
D207	G - 4	IC201	F - 7	Q40	J - 8	Q701	E - 8	TH1004	C - 1		
D208	I - 2	IC202	F - 4	Q41	K - 8	Q702	E - 7				
D209	I - 3	IC203	F - 3	Q42	K - 8	Q703	C - 6	TP1	J - 7		
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D211	H - 4	IC205	I - 4	Q44	L - 1	Q705	C - 5	TP4	K - 8		
D212	H - 6	IC206	H - 7	Q45	L - 1	Q706	E - 7	TP6	M - 1		
D213	H - 7	IC207	H - 8	Q46	L - 1	Q707	E - 6	TP7	K - 5		
D214	H - 7	IC208	G - 8	Q47	L - 1	Q708	D - 7	TP8	L - 5		
D215	H - 7	IC209	H - 7	Q48	L - 2	Q711	C - 1	TP9	K - 1		
D216	I - 2	IC210	G - 5	Q201	F - 8	Q712	B - 1	TP10	L - 2		
D401	O - 7	IC211	H - 6	Q205	F - 7	Q713	E - 5	TP11	K - 4		
D402	O - 7	IC212	H - 6	Q206	F - 5	Q714	D - 1	TP12	L - 4		
D403	N - 6	IC213	G - 4	Q207	G - 4	Q716	E - 3	TP13	K - 5		
D404	P - 7	IC214	H - 2	Q208	G - 3	Q717	E - 2	TP201	F - 7		
D405	P - 5	IC215	F - 3	Q209	G - 2	Q718	E - 2	TP203	F - 8		
D406	P - 5	IC401	O - 7	Q210	G - 2	Q719	F - 2	TP204	F - 4		
D407	J - 4	IC402	N - 6	Q211	G - 2	Q720	D - 1	TP205	F - 5		
D409	O - 1	IC403	P - 4	Q212	G - 1	Q813	C - 3	TP207	I - 5		
D410	O - 1	IC404	P - 5	Q213	H - 1	Q814	C - 3	TP208	H - 3		
D601	B - 3	IC405	P - 4	Q214	H - 1	Q815	D - 3	TP210	J - 2		
D602	B - 3	IC406	J - 4	Q218	I - 2	Q816	D - 2	TP211	G - 3		
D701	D - 6	IC411	I - 6	Q219	I - 3	Q817	C - 2	TP212	H - 4		
D702	C - 6	IC412	P - 3	Q220	I - 3	Q818	B - 2	TP213	G - 5		
D703	C - 5	IC413	P - 3	Q221	H - 3	Q819	A - 2	TP214	H - 4		
D704	C - 1	IC414	N - 1	Q222	G - 4	Q1001	K - 6	TP215	H - 1		
D706	D - 1	IC508	N - 4	Q223	H - 4	Q1100	G - 6	TP216	H - 2		
D1002	P - 2	IC509	O - 3	Q224	H - 5	Q1101	F - 6	TP401	P - 7		
D1003	P - 2	IC510	O - 4	Q225	I - 5			TP402	N - 8		
D1004	P - 2	IC602	B - 7	Q226	H - 5	RV1	K - 6	TP403	N - 6		
D1005	O - 1	IC603	B - 8	Q227	I - 5	RV4	L - 2	TP404	P - 6		
D1006	E - 2	IC608	B - 6	Q228	H - 5	RV5	K - 3	TP407	P - 5		
D1007	E - 2	IC611	A - 6	Q229	I - 7	RV6	K - 4	TP408	O - 8		
D1008	E - 2	IC612	A - 7	Q230	H - 7	RV7	L - 4	TP409	P - 8		
D1009	C - 1	IC615	B - 4	Q231	H - 8	RV8	K - 7	TP410	P - 1		
D1010	D - 1	IC701	C - 7	Q232	G - 8	RV10	K - 1	TP411	O - 1		
		IC702	D - 5	Q233	H - 8	RV11	L - 1	TP415	N - 8		
		IC703	M - 7	Q236	G - 1	RV12	L - 2	TP417	N - 7		
DL201	F - 5	IC706	E - 5	Q239	G - 7	RV202	G - 5	TP506	O - 3		
DL401	P - 4	IC707	D - 6	Q240	F - 8	RV204	I - 2	TP507	M - 5		
DL402	P - 4	IC714	B - 1	Q241	G - 8	RV205	H - 2	TP601	B - 9		
DL503	M - 3	IC715	E - 3	Q242	G - 4	RV206	G - 4	TP605	A - 8		
DL601	A - 4	IC716	E - 3	Q243	J - 2	RV207	H - 4	TP606	A - 6		
DL701	E - 4	IC717	D - 1	Q244	J - 1	RV208	G - 8	TP701	E - 7		
DL702	D - 4	IC810	C - 4	Q245	I - 1	RV210	G - 1	TP702	B - 8		
DL802	C - 3	IC811	C - 2	Q246	I - 1	RV211	I - 2	TP703	C - 5		
		IC812	B - 2	Q247	I - 1	RV212	I - 1	TP704	C - 6		
E1	K - 7			Q248	I - 2	RV401	O - 8	TP708	D - 6		
E2	J - 5	LV1	K - 4	Q401	P - 8	RV402	O - 8	TP709	D - 6		
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E4	M - 4	LV401	O - 8	Q403	P - 7	RV404	P - 8	TP711	D - 4		
E201	G - 7	LV402	P - 8	Q404	N - 7	RV405	P - 7	TP712	A - 1		
E202	I - 4	LV601	B - 5	Q405	N - 5	RV406	P - 5	TP715	C - 8		
E203	J - 1	LV701	D - 8	Q406	N - 6	RV408	N - 2	TP730	M - 8		
E204	F - 3	LV702	E - 8	Q407	O - 6	RV409	N - 2	TP806	D - 3		
E401	P - 8			Q408	P - 8	RV415	P - 3	TP807	C - 4		
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YC-14, DU-73 YC-14, DU-73

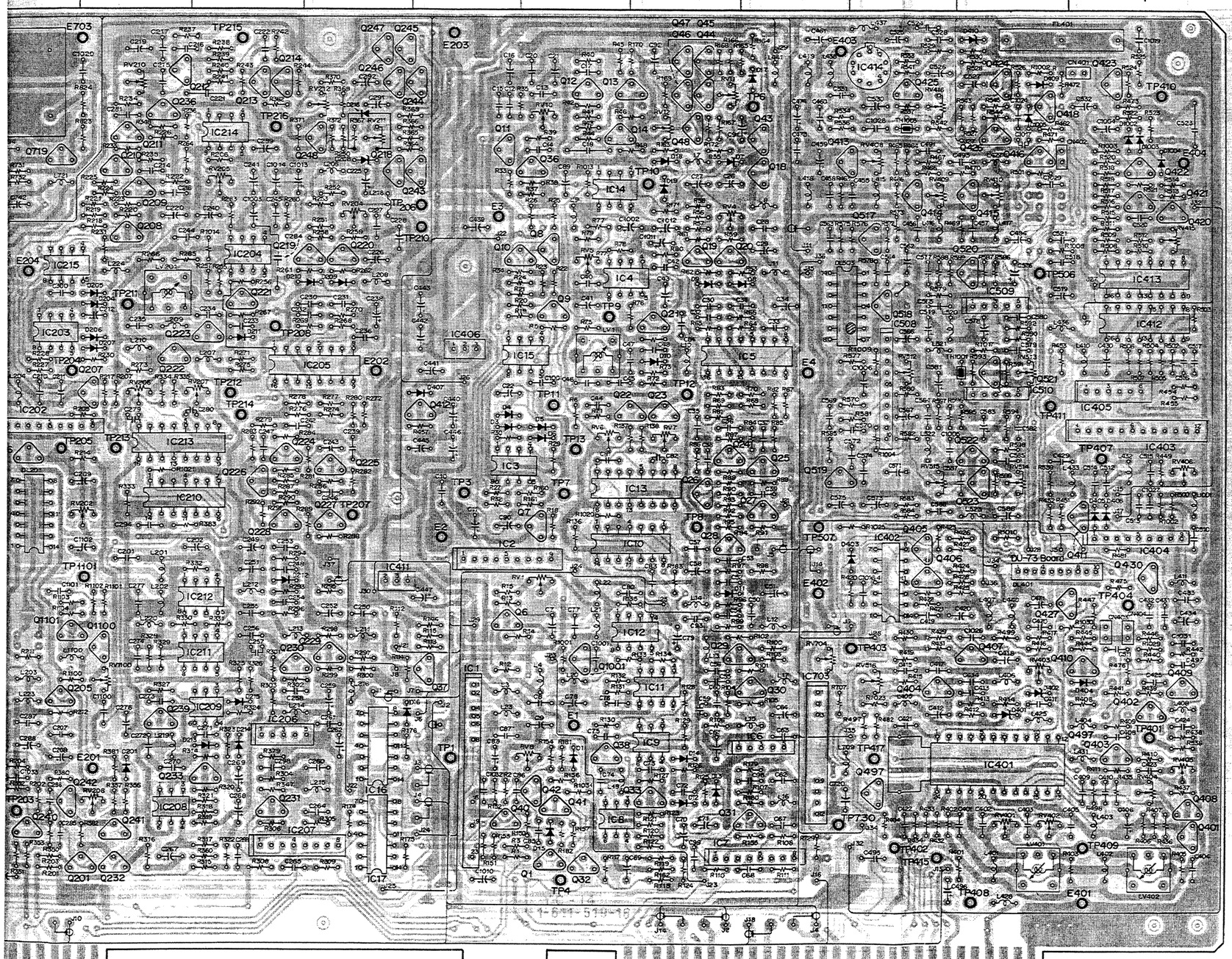
YC-14 (Y/C MODULATOR AND DEMODULATOR)
DU-73

S/N 11273 AND LATER (P)
S/N 10061 AND LATER (S)



18-56 (c)

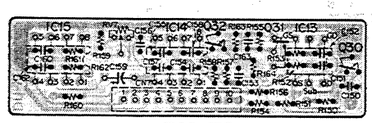
18-57 (c)



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CN403	P - 6	E601	A - 7	Q8	K - 3	Q412	J - 4	RV514	O - 5		
CN404	P - 6	E701	C - 8	Q9	K - 3	Q413	M - 2	RV515	N - 5		
CN701	D - 3	E702	E - 6	Q10	J - 3	Q414	N - 2	RV516	N - 7		
		E703	F - 1	Q11	J - 2	Q415	O - 2	RV601	B - 6		
D1	K - 7	E704	A - 1	Q12	K - 1	Q416	O - 2	RV604	A - 6		
D3	J - 4			Q13	K - 1	Q418	O - 1	RV605	B - 5		
D4	J - 4	FL401	O - 1	Q14	K - 2	Q420	P - 2	RV606	A - 7		
D5	K - 4	FL701	E - 1	Q18	M - 2	Q421	P - 2	RV701	C - 7		
D6	K - 4			Q19	L - 3	Q422	P - 2	RV702	D - 7		
D7	L - 2	IC1	J - 7	Q20	L - 3	Q423	P - 1	RV703	D - 6		
D8	L - 3	IC2	J - 6	Q21	L - 3	Q424	O - 1	RV704	M - 6		
D9	L - 3	IC3	J - 5	Q22	K - 4	Q425	N - 1	RV706	E - 7		
D10	L - 4	IC4	K - 3	Q23	L - 4	Q426	O - 2	RV707	E - 7		
D11	L - 6	IC5	M - 4	Q24	L - 5	Q427	O - 6	RV708	D - 5		
D12	L - 8	IC6	M - 7	Q25	M - 5	Q430	P - 6	RV716	D - 3		
D13	L - 8	IC7	L - 8	Q26	L - 5	Q497	N - 7	RV717	D - 1		
D14	L - 7	IC8	K - 8	Q27	M - 5	Q517	N - 3	RV718	B - 1		
D15	K - 8	IC9	L - 7	Q28	L - 5	Q518	N - 3	RV813	C - 1		
D16	I - 7	IC10	K - 5	Q29	L - 6	Q519	M - 5	RV814	C - 2		
D17	M - 1	IC11	L - 7	Q30	M - 7	Q520	O - 3	RV815	B - 2		
D18	L - 2	IC12	L - 6	Q31	M - 8	Q521	O - 4	RV816	B - 2		
D19	I - 2	IC13	K - 5	Q32	K - 8	Q522	O - 5	RV1100	G - 7		
D201	G - 7	IC14	K - 2	Q33	L - 8	Q523	O - 5				
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D205	G - 3	IC16	I - 7	Q37	J - 7	Q604	B - 3	TH1002	C - 2		
D206	G - 4	IC17	I - 8	Q38	K - 7	Q606	A - 5	TH1003	N - 2		
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D211	H - 4	IC205	I - 4	Q44	L - 1	Q705	C - 5	TP4	K - 8		
D212	H - 6	IC206	H - 7	Q45	L - 1	Q706	E - 7	TP5	M - 1		
D213	H - 7	IC207	H - 8	Q46	L - 1	Q707	E - 6	TP7	K - 5		
D214	H - 7	IC208	G - 8	Q47	L - 1	Q708	D - 7	TP8	L - 5		
D215	H - 7	IC209	H - 7	Q48	L - 2	Q711	C - 1	TP9	K - 4		
D216	I - 2	IC210	G - 5	Q201	F - 8	Q712	B - 1	TP10	L - 2		
D401	O - 7	IC211	H - 6	Q205	F - 7	Q713	E - 5	TP11	K - 4		
D402	O - 7	IC212	H - 6	Q206	F - 5	Q714	D - 1	TP12	L - 4		
D403	N - 6	IC213	G - 4	Q207	G - 4	Q716	E - 3	TP13	K - 5		
D404	P - 7	IC214	H - 2	Q208	G - 3	Q717	H - 2	TP201	F - 7		
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D406	P - 5	IC401	O - 7	Q210	G - 2	Q719	F - 2	TP204	F - 4		
D407	J - 4	IC402	N - 6	Q211	G - 2	Q720	D - 1	TP205	F - 5		
D409	O - 1	IC403	P - 4	Q212	G - 1	Q813	C - 3	TP207	I - 5		
D410	O - 1	IC404	P - 5	Q213	H - 1	Q814	C - 3	TP208	H - 3		
D601	B - 3	IC405	P - 4	Q214	H - 1	Q815	D - 3	TP210	J - 2		
D602	B - 3	IC406	J - 4	Q218	I - 2	Q816	D - 2	TP211	G - 3		
D701	D - 6	IC411	I - 6	Q219	I - 3	Q817	C - 2	TP212	H - 4		
D702	C - 6	IC412	P - 3	Q220	I - 3	Q818	B - 2	TP213	G - 5		
D703	C - 5	IC413	P - 3	Q221	H - 3	Q819	A - 2	TP214	H - 4		
D704	C - 1	IC414	N - 1	Q222	G - 4	Q1001	K - 6	TP215	H - 1		
D706	D - 1	IC508	N - 4	Q223	H - 4	Q1100	G - 6	TP216	H - 2		
D1002	P - 2	IC509	O - 3	Q224	H - 5	Q1101	F - 6	TP401	P - 7		
D1003	P - 2	IC510	O - 4	Q225	I - 5			TP402	N - 8		
D1004	P - 2	IC602	B - 7	Q226	H - 5	RV1	K - 6	TP403	N - 6		
D1005	O - 1	IC603	B - 8	Q227	I - 5	RV4	L - 2	TP404	P - 6		
D1006	E - 2	IC608	B - 6	Q228	H - 5	RV5	K - 3	TP407	P - 5		
D1007	E - 2	IC611	A - 6	Q229	I - 7	RV6	K - 4	TP408	O - 8		
D1008	E - 2	IC612	A - 7	Q230	H - 7	RV7	L - 4	TP409	P - 8		
D1009	C - 1	IC615	B - 4	Q231	H - 8	RV8	K - 7	TP410	P - 1		
D1010	D - 1	IC701	C - 7	Q232	G - 8	RV10	K - 1	TP411	O - 4		
		IC702	D - 5	Q233	H - 8	RV11	L - 1	TP415	N - 8		
DL201	F - 5	IC703	M - 7	Q236	G - 1	RV12	L - 2	TP417	N - 7		
DL401	P - 4	IC706	E - 5	Q238	G - 7	RV202	G - 5	TP506	O - 3		
DL402	P - 4	IC707	D - 6	Q240	F - 8	RV204	I - 2	TP507	M - 5		
DL503	M - 3	IC714	B - 1	Q241	G - 8	RV205	H - 2	TP601	B - 9		
DL601	A - 4	IC715	E - 3	Q242	F - 8	RV206	G - 4	TP605	A - 8		
DL701	E - 4	IC716	E - 3	Q243	J - 2	RV207	H - 4	TP606	A - 6		
DL702	D - 4	IC717	D - 1	Q244	J - 1	RV208	G - 8	TP701	E - 7		
DL802	C - 3	IC810	C - 4	Q245	I - 1	RV210	G - 1	TP702	B - 8		
		IC811	C - 2	Q246	I - 1	RV211	I - 2	TP705	C - 5		
E1	K - 7	IC812	B - 2	Q247	I - 1	RV212	I - 1	TP704	C - 6		
E2	J - 5	LV1	K - 4	Q248	I - 2	RV401	O - 8	TP708	D - 6		
E3	J - 2	LV201	G - 3	Q402	P - 7	RV402	O - 8	TP709	D - 6		
E4	M - 4	LV401	O - 8	Q403	P - 7	RV403	O - 7	TP710	E - 6		
E201	G - 7	LV402	P - 8	Q404	N - 7	RV404	P - 8	TP711	D - 4		
E202	I - 4	LV601	B - 5	Q405	N - 5	RV405	P - 7	TP712	A - 1		
E203	J - 1	LV701	D - 8	Q406	N - 6	RV406	P - 5	TP715	C - 8		
E204	F - 3	LV702	E - 8	Q407	O - 6	RV408	N - 2	TP730	M - 8		
E401	P - 8			Q408	P - 8	RV415	P - 3	TP806	D - 3		
E402	M - 6	Q1	K - 8	Q409	P - 7	RV416	N - 1	TP807	C - 4		
								TP1101	F - 6		

1A-30A---COMPONENT SIDE
1B-30B---SOLDERING SIDE

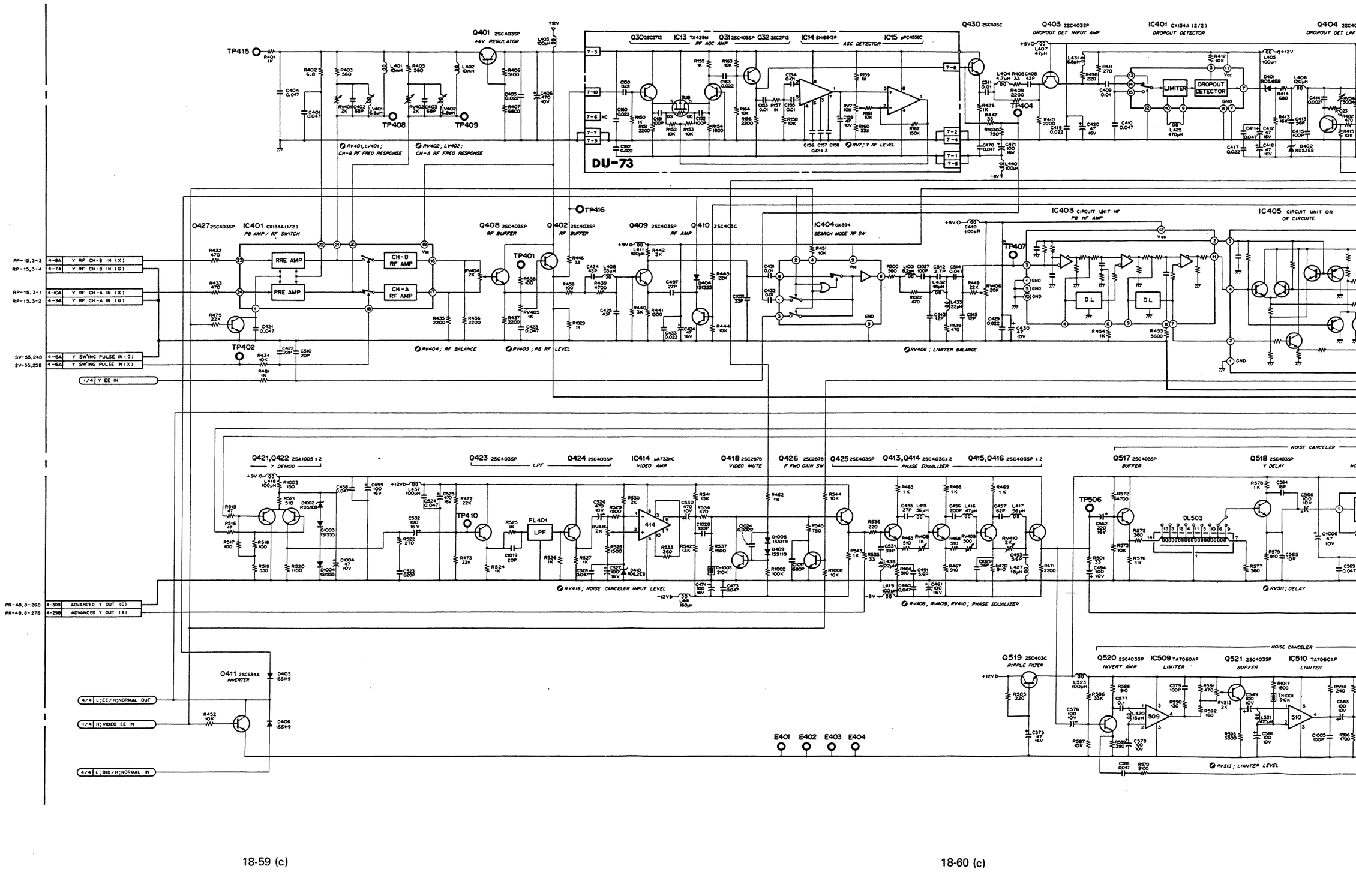
YC-14 – SOLDERING SIDE –
1-611-519-16
BVW-40P
BVW-40S

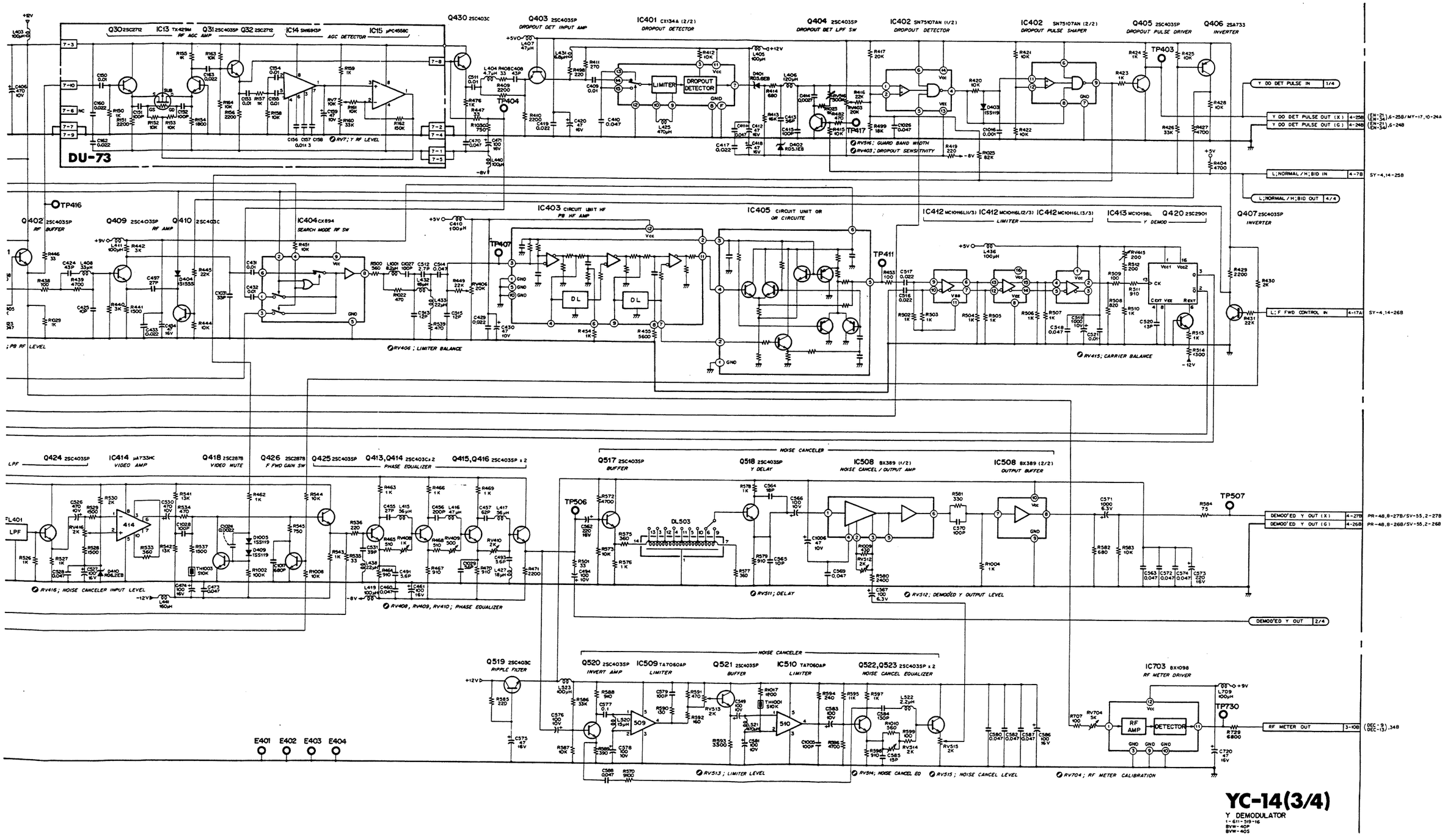


DU-73 –SOLDERING SIDE–
1-611-672-12,13
BVW-40
BVW-40P
BVW-40S

YC-14 (3/4) (Y DEMODULATOR)

S/N 11273 AND LATER (P)
S/N 10061 AND LATER (S)



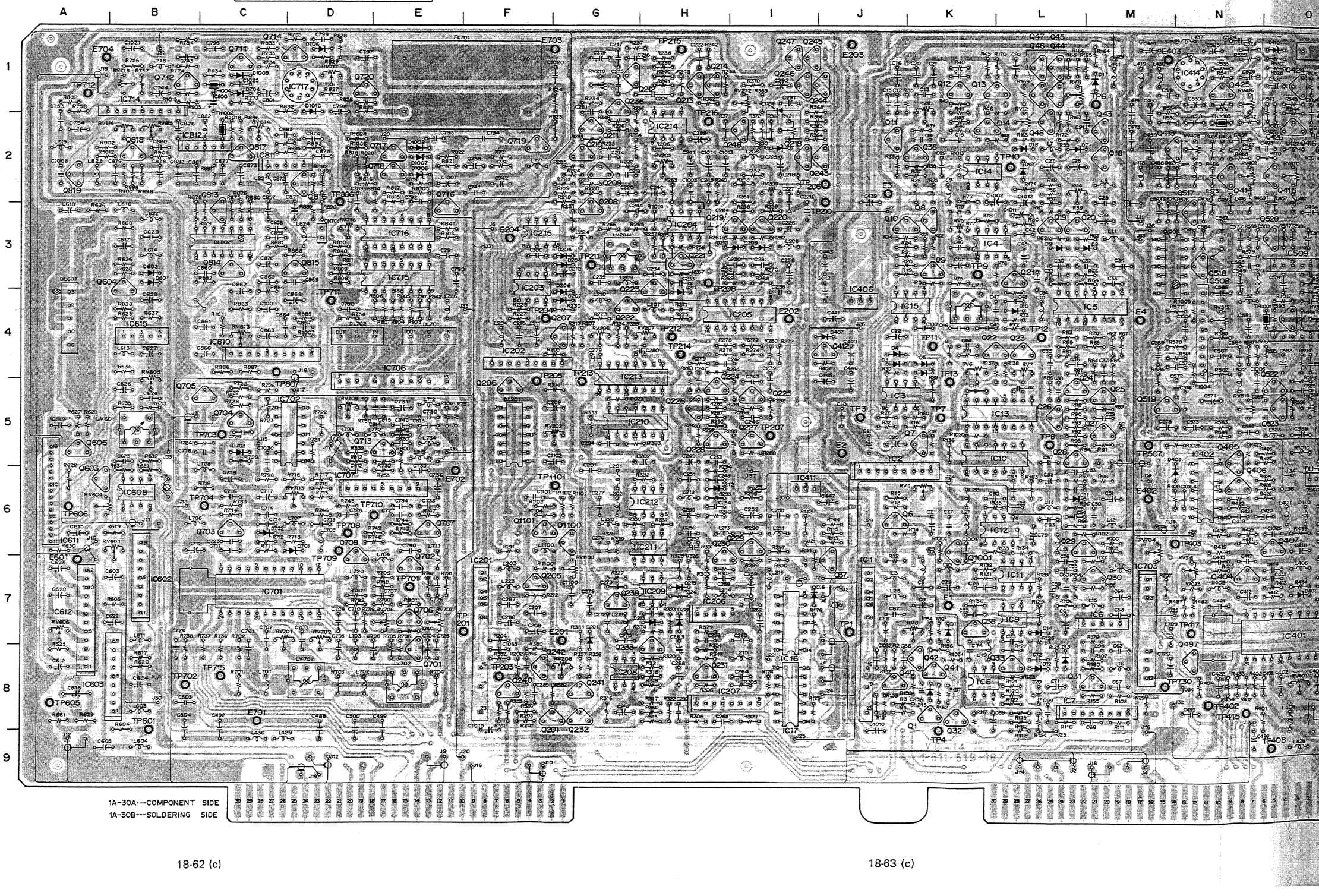


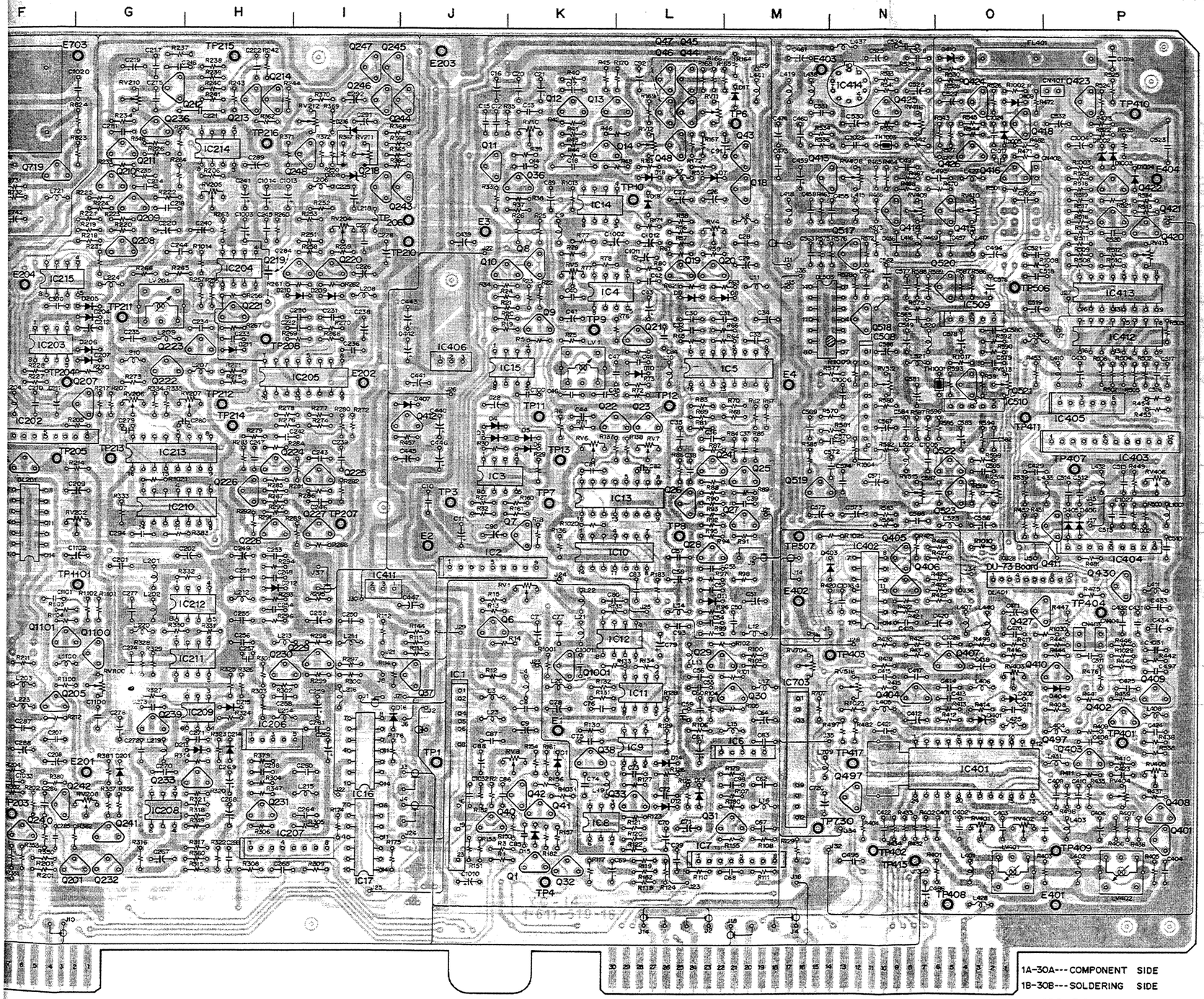
YC-14(3/4)
Y DEMODULATOR
1-611-518-16
BVW-40P
BVW-40S

YC-14 YC-14

YC-14 (Y/C MODULATOR AND DEMODULATOR)

S/N 11273 AND LATER (P)
S/N 10061 AND LATER (S)





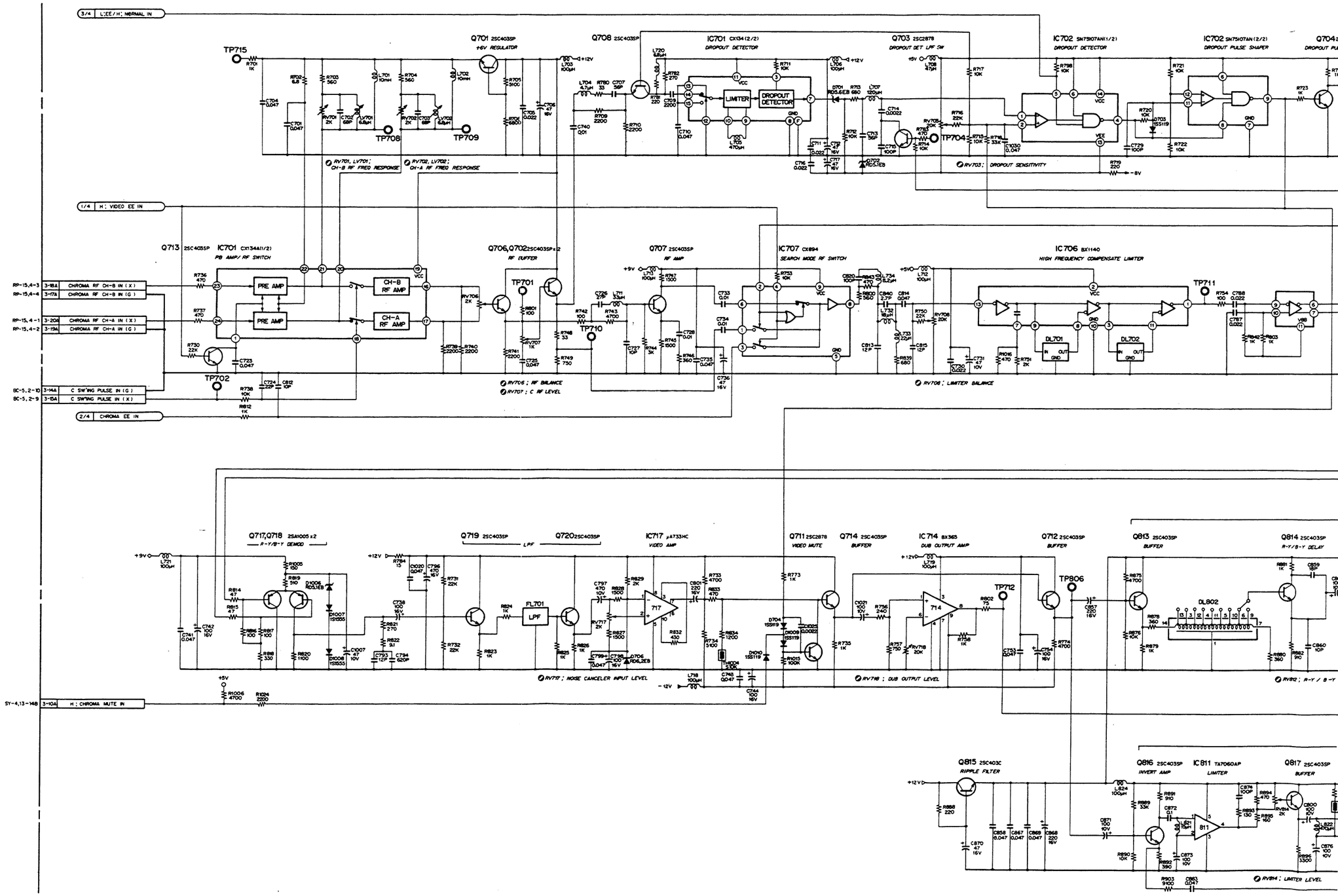
CN401	P - 1	E403	M - 1	Q6	J - 6	Q410	P - 7	RV512	N - 4
CN402	O - 2	E404	P - 2	Q7	K - 5	Q411	P - 5	RV513	O - 4
CN403	P - 6	E601	A - 7	Q8	K - 3	Q412	J - 4	RV514	O - 5
CN404	P - 6	E701	C - 8	Q9	K - 3	Q413	M - 2	RV515	N - 5
CN701	D - 3	E702	E - 6	Q10	J - 3	Q414	N - 2	RV516	N - 7
		E703	F - 1	Q11	J - 2	Q415	O - 2	RV601	B - 6
D1	K - 7	E704	A - 1	Q12	K - 1	Q416	O - 2	RV604	A - 6
D3	J - 4			Q13	K - 1	Q418	O - 1	RV605	B - 5
D4	J - 4	FL401	O - 1	Q14	K - 2	Q420	P - 2	RV606	A - 7
D5	K - 4	FL701	E - 1	Q18	M - 2	Q421	P - 2	RV701	C - 7
D6	K - 4			Q19	L - 3	Q422	P - 2	RV702	D - 7
D7	L - 2	IC1	J - 7	Q20	L - 3	Q423	P - 1	RV703	D - 6
D8	L - 3	IC2	J - 6	Q21	L - 3	Q424	O - 1	RV704	M - 6
D9	L - 3	IC3	J - 5	Q22	K - 4	Q425	N - 1	RV706	E - 7
D10	L - 4	IC4	K - 3	Q23	L - 4	Q426	O - 2	RV707	E - 7
D11	L - 6	IC5	M - 4	Q24	L - 5	Q427	O - 6	RV708	D - 5
D12	L - 8	IC6	M - 7	Q25	M - 5	Q430	P - 6	RV716	D - 3
D13	L - 8	IC7	L - 8	Q26	L - 5	Q497	N - 7	RV717	D - 1
D14	L - 7	IC8	K - 8	Q27	M - 5	Q517	N - 3	RV718	B - 1
D15	K - 8	IC9	L - 7	Q28	L - 5	Q518	N - 3	RV813	C - 4
D16	I - 7	IC10	K - 5	Q29	L - 6	Q519	M - 5	RV814	C - 2
D17	M - 1	IC11	L - 7	Q30	M - 7	Q520	O - 3	RV815	B - 2
D18	L - 2	IC12	L - 6	Q31	M - 8	Q521	O - 4	RV816	B - 2
D19	L - 2	IC13	K - 5	Q32	K - 8	Q522	O - 5	RV1100	G - 7
D201	G - 7	IC14	K - 2	Q33	L - 8	Q523	O - 5		
D204	G - 3	IC15	K - 4	Q36	K - 2	Q603	A - 6	TH1001	O - 4
D205	G - 3	IC16	I - 7	Q37	J - 7	Q604	B - 3	TH1002	C - 2
D206	G - 4	IC17	I - 8	Q38	K - 7	Q606	A - 5	TH1003	N - 2
D207	G - 4	IC201	F - 7	Q40	J - 8	Q701	E - 8	TH1004	C - 1
D208	I - 2	IC202	F - 4	Q41	K - 8	Q702	E - 7		
D209	L - 3	IC203	F - 3	Q42	K - 8	Q703	C - 6	TP1	J - 7
D210	I - 3	IC204	H - 3	Q43	M - 2	Q704	C - 5	TP3	J - 5
D211	H - 4	IC205	I - 4	Q44	L - 1	Q705	C - 5	TP4	K - 8
D212	H - 6	IC206	H - 7	Q45	L - 1	Q706	E - 7	TP6	M - 1
D213	H - 7	IC207	H - 8	Q46	L - 1	Q707	E - 6	TP7	K - 5
D214	H - 7	IC208	G - 8	Q47	L - 1	Q708	D - 7	TP8	L - 5
D215	H - 7	IC209	H - 7	Q48	L - 2	Q711	C - 1	TP9	K - 4
D216	I - 2	IC210	G - 5	Q201	F - 8	Q712	B - 1	TP10	L - 2
D401	O - 7	IC211	H - 6	Q205	F - 7	Q713	E - 5	TP11	K - 4
D402	O - 7	IC212	H - 6	Q208	F - 5	Q714	D - 1	TP12	L - 4
D403	N - 6	IC213	G - 4	Q209	G - 4	Q716	E - 2	TP13	K - 5
D404	P - 7	IC214	H - 2	Q210	G - 3	Q717	E - 2	TP201	F - 7
D405	P - 5	IC215	F - 3	Q211	G - 2	Q718	E - 2	TP203	F - 8
D406	P - 5	IC401	O - 7	Q212	G - 2	Q719	F - 2	TP204	F - 4
D407	J - 4	IC402	N - 6	Q213	G - 1	Q720	D - 1	TP205	F - 5
D409	O - 1	IC403	P - 4	Q214	H - 1	Q813	C - 3	TP207	I - 5
D410	O - 1	IC404	P - 5	Q218	I - 2	Q814	C - 3	TP208	H - 3
D601	B - 3	IC405	P - 4	Q219	I - 3	Q815	D - 3	TP210	J - 2
D602	B - 3	IC406	J - 4	Q220	I - 3	Q816	D - 2	TP211	G - 3
D701	D - 6	IC411	I - 6	Q221	H - 3	Q817	C - 2	TP212	H - 4
D702	C - 6	IC412	P - 3	Q222	G - 4	Q818	B - 2	TP213	G - 5
D703	C - 5	IC413	P - 3	Q223	H - 4	Q819	A - 2	TP214	H - 4
D704	C - 1	IC414	N - 1	Q224	G - 4	Q1001	K - 6	TP215	H - 1
D705	D - 1	IC506	N - 4	Q225	H - 4	Q1100	G - 6	TP216	H - 2
D1002	P - 2	IC509	O - 3	Q226	H - 5	Q1101	F - 6	TP401	P - 7
D1003	P - 2	IC510	O - 4	Q227	I - 5			TP402	N - 8
D1004	P - 2	IC602	B - 7	Q228	H - 5	RV1	K - 6	TP403	N - 6
D1005	O - 1	IC603	B - 8	Q229	I - 7	RV4	L - 2	TP404	P - 6
D1006	E - 2	IC608	B - 6	Q230	H - 7	RV5	K - 3	TP407	P - 5
D1007	E - 2	IC611	A - 6	Q231	H - 8	RV6	K - 4	TP408	O - 8
D1008	E - 2	IC612	A - 7	Q232	G - 8	RV7	L - 4	TP409	P - 8
D1009	C - 1	IC615	B - 4	Q233	H - 8	RV8	K - 7	TP410	P - 1
D1010	D - 1	IC701	C - 7	Q239	G - 8	RV10	K - 1	TP411	O - 4
		IC702	D - 5	Q240	H - 8	RV11	L - 1	TP415	N - 8
		IC703	M - 7	Q241	G - 1	RV12	L - 2	TP417	N - 7
DL201	F - 5	IC706	E - 5	Q242	G - 7	RV202	G - 5	TP506	O - 3
DL401	P - 4	IC707	D - 6	Q243	F - 8	RV204	I - 2	TP507	M - 5
DL402	P - 4	IC714	B - 1	Q244	G - 8	RV205	H - 2	TP601	B - 9
DL503	M - 3	IC715	E - 3	Q245	J - 2	RV206	G - 4	TP605	A - 8
DL601	A - 4	IC716	E - 3	Q246	J - 1	RV207	H - 4	TP606	A - 6
DL701	E - 4	IC717	D - 1	Q247	I - 1	RV208	G - 8	TP701	E - 7
DL702	D - 4	IC810	C - 4	Q248	I - 1	RV210	G - 1	TP702	B - 8
DL802	C - 3	IC811	C - 2	Q249	I - 1	RV211	I - 2	TP703	C - 5
		IC812	B - 2	Q247	I - 1	RV212	I - 1	TP704	C - 6
E1	K - 7			Q248	I - 2	RV401	O - 8	TP708	D - 6
E2	J - 5	LV1	K - 4	Q401	P - 8	RV402	O - 8	TP709	D - 6
E3	J - 2	LV201	G - 3	Q402	P - 7	RV403	O - 7	TP710	E - 6
E4	M - 4	LV401	O - 8	Q403	P - 7	RV404	P - 8	TP711	D - 4
E201	G - 7	LV402	P - 8	Q404	N - 7	RV405	P - 7	TP712	A - 1
E202	I - 4	LV601	B - 5	Q405	N - 5	RV406	P - 5	TP715	C - 8
E203	J - 1	LV701	D - 8	Q406	N - 6	RV408	N - 2	TP730	M - 8
E204	F - 3	LV702	E - 8	Q407	O - 6	RV409	N - 2	TP806	D - 3
E401	P - 8			Q408	P - 8	RV415	P - 3	TP807	C - 4
E402	M - 6	Q1	K - 8	Q409	P - 7	RV416	N - 1	TP1101	F - 6

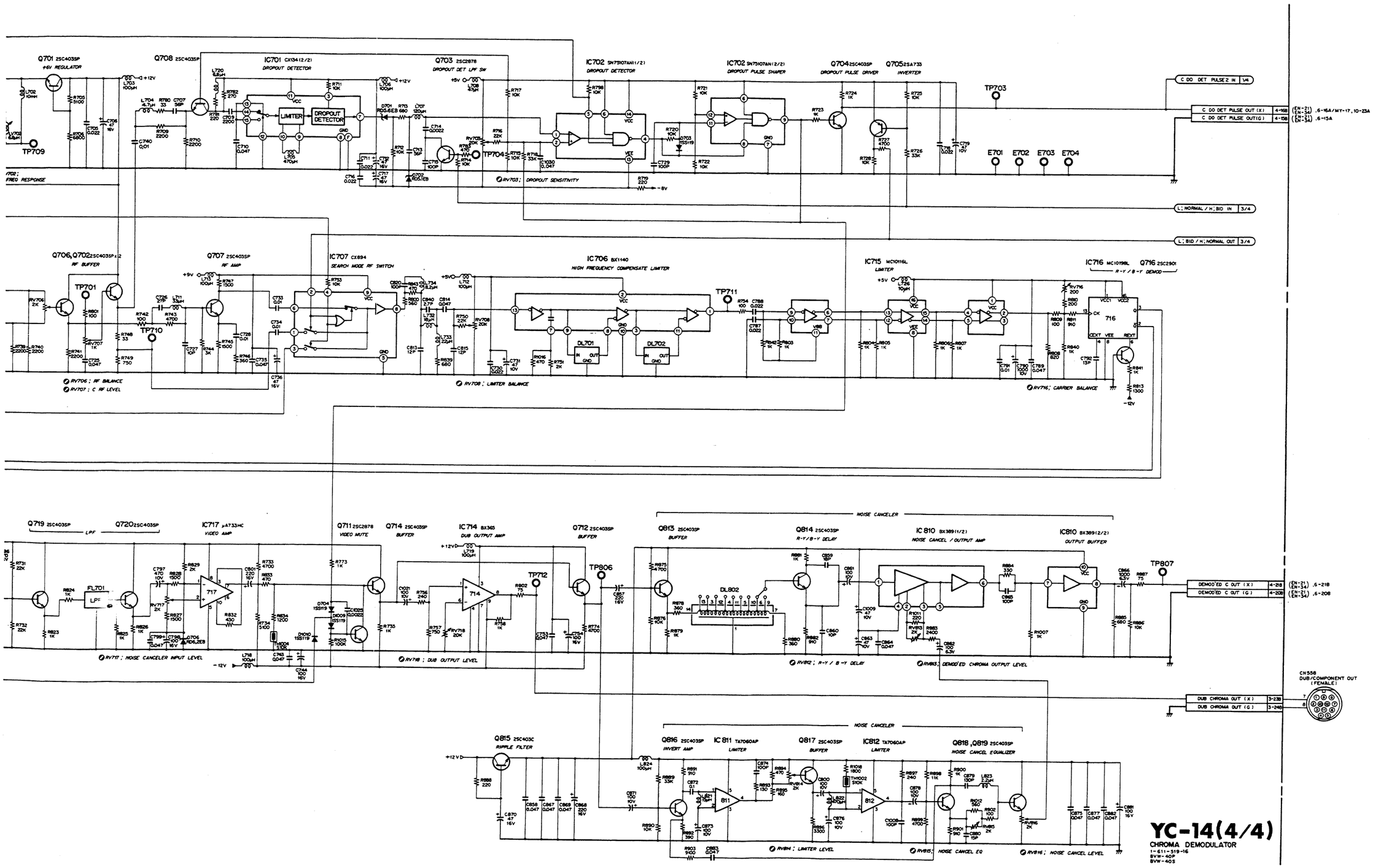
1A-30A---COMPONENT SIDE
1B-30B---SOLDERING SIDE

YC-14– SOLDERING SIDE –
1-611-519-16
8VW-40P
8VW-40S

YC-14 (4/4) (CHROMA DEMODULATOR)

S/N 11273 AND LATER (P)
S/N 10061 AND LATER (S)

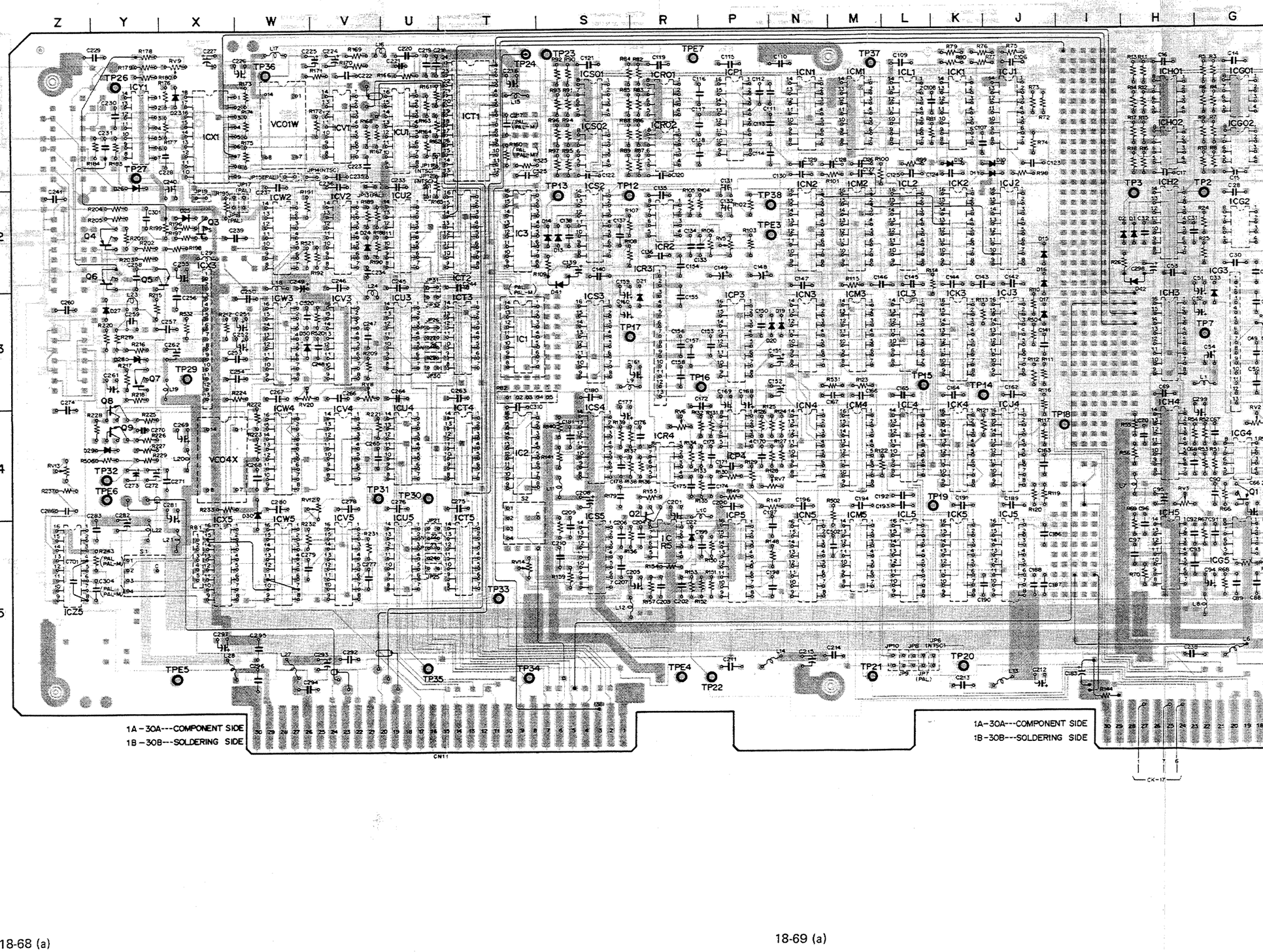


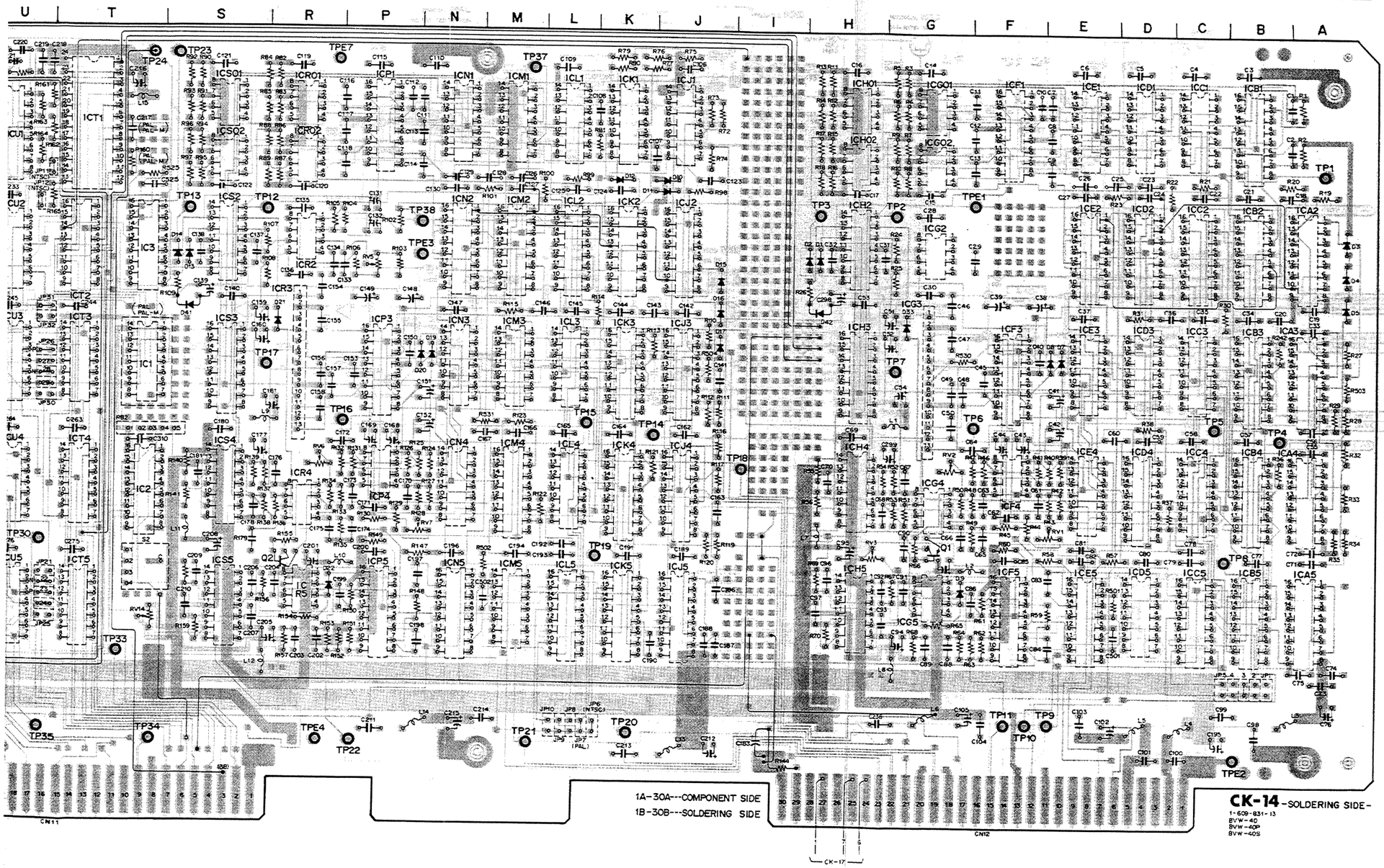

Q701 2SC4033SP
+6V REGULATOR
Q708 2SC4033SP
IC701 CX334(2/2)
DROPOUT DETECTOR
LIMITER
DROPOUT DETECTOR
Q703 2SC2878
DROPOUT DET LAF SW
IC702 SN75107AN(1/2)
DROPOUT DETECTOR
IC702 SN75107AN(2/2)
DROPOUT PULSE SHAPER
Q704 2SC4033SP
DROPOUT PULSE DRIVER
Q705 2SA733
INVERTER
TP703
TP709
TP704
TP710
TP701
TP711
E701 E702 E703 E704
C DO DET PULSE 2 IN 1/4
C DO DET PULSE OUT (X) 4-19B
C DO DET PULSE OUT (G) 4-15B
(EN-21) .6-15A/MY-17, 10-23A
(EN-34)
(EN-21) .6-15A
(EN-34)
L; NORMAL / H; BID IN 3/4
L; BID / H; NORMAL OUT 3/4
RV703; DROPOUT SENSITIVITY
RV706; RF BALANCE
RV707; C RF LEVEL
RV708; LIMITER BALANCE
RV716; CARRIER BALANCE
Q706,Q702 2SC4033SP×2
RF BUFFER
Q707 2SC4033SP
RF AMP
IC707 CX894
SEARCH MODE RF SWITCH
IC706 BX1140
HIGH FREQUENCY COMPENSATE LIMITER
IC715 MC10116L
LIMITER
IC716 MC10198L
Q716 2SC2901
R-Y / B-Y DEMOD
716
Q719 2SC4033SP
LPF
Q720 2SC4033SP
IC717 μA733HC
VIDEO AMP
Q711 2SC2878
VIDEO MUTE
Q714 2SC4033SP
BUFFER
IC714 BX365
DUB OUTPUT AMP
Q712 2SC4033SP
BUFFER
TP806
TP712
TP807
NOISE CANCELER
Q813 2SC4033SP
BUFFER
Q814 2SC4033SP
R-Y/B-Y DELAY
IC810 BX3891(1/2)
NOISE CANCEL / OUTPUT AMP
IC810 BX3891(2/2)
OUTPUT BUFFER
DL802
FL701
LPF
717
714
DEMOD'ED C OUT (X) 4-21B
DEMOD'ED C OUT (G) 4-20B
(EN-21) .6-21B
(EN-34) .6-20B
RV717; NOISE CANCELER INPUT LEVEL
RV718; DUB OUTPUT LEVEL
RV812; R-Y / B-Y DELAY
RV813; DEMOD'ED CHROMA OUTPUT LEVEL
CN558
DUB/COMPONENT OUT
(FEMALE)
DUB CHROMA OUT (X) 3-23B
DUB CHROMA OUT (G) 3-24B
Q815 2SC4033C
RIPPLE FILTER
NOISE CANCELER
Q816 2SC4033SP
INVERT AMP
IC811 TA7060AP
LIMITER
Q817 2SC4033SP
BUFFER
IC812 TA7060AP
LIMITER
Q818,Q819 2SC4033SP
NOISE CANCEL EQUALIZER
811
812
RV814; LIMITER LEVEL
RV815; NOISE CANCEL EQ
RV816; NOISE CANCEL LEVEL
YC-14(4/4)
CHROMA DEMODULATOR
1-611-519-16
BVW-40P
BVW-40S

CK-14 (VIDEO TBC)

UP TO S/N 11040 (P)
UP TO S/N 10029 (S)

Ref. No.	Type	Pin No. −11V	−5V	GND	+5V	+11V
IC 1	SN74LS74AN			7	14	
IC 2						
IC 3	SN74LS122N			8	16	
IC A2	HD10124		8	16	9	
IC A3	MC10198L		8	1, 16		
IC A4	MC10198L		8	1, 16		
IC A5	HD10125		8	16	9	
IC B1	SN74LS423N			8	16	
IC B2	SN74LS221N			8	16	
IC B3	SN74LS163AN			8	16	
IC B4	SN74S163N			8	16	
IC B5	SN7419N			8	16	
IC C1	SN74LS74AN			7	14	
IC C2	SN74LS163AN			8	16	
IC C3	SN7400N			7	14	
IC C4	SN74LS74AN			7	14	
IC C5	SN74LS174N			8	16	
IC D1	SN74LS00N			7	14	
IC D2	SN74LS221N			8	16	
IC D3	SN74LS164N			7	14	
IC D4	SN74LS123N			8	16	
IC D5	SN74S51N			7	14	
IC E1	SN74LS51N			7	14	
IC E2	SN74LS112AN			8	16	
IC E3	SN74LS08N			7	14	
IC E4	SN74LS04N			7	14	
IC E5	SN74LS221N			8	16	
IC F1	HA1-4905-5	5		9	1	13
IC F2	HI1-201-5	4		5		13
IC F4	μPC4557C	4				8
IC F5	SN74LS221N			8	16	
IC G01	TL601CP	5		1		8
IC G02	TL601CP	5		1		8
IC G2	TL082CP	4				8
IC G3	BX381	9		6		2
IC G4	NJM4560D	4				8
IC G5	SN75452BP			4	8	
IC H01	TL601CP	5		1		8
IC H02	TL601CP	5		1		8
IC H2	TL084CN	11				4
IC H3	HI1-201-5	4		5		13
IC H4	SN75207BN		13	7	14	
IC H5	μPC319C	6		3, 8		11
IC J1	SN7406N			7	14	
IC J2	HD10124		8	16	9	
IC J3	MC10198L		8	1, 16		
IC J4	MC10198L		8	1, 16		
IC J5	HD10125		8	16	9	
IC K1	μPC319C	6		3, 8		11
IC K2	SN74LS221AN			8	16	
IC K3	SN74LS163AN			8	16	
IC K4	SN74S163N			8	16	
IC K5	SN74191N			8	16	
IC L1	SN74LS74AN		7	14		
IC L2	SN74LS163AN			8	16	
IC L3	SN7400N			7	14	
IC L4	SN74LS74AN			7	14	
IC L5	SN74LS174N			8	16	
IC M1	SN74LS00N			7	14	
IC M2	SN74LS221N			8	16	
IC M3	SN74LS164N			7	14	
IC M4	SN74LS123N			8	16	
IC M5	SN74S51N			7	14	
IC N1	SN74LS51N			7	14	
IC N2	SN74LS112AN			8	16	
IC N3	SN74LS08N			7	14	
IC N4	SN74LS04N			7	14	
IC N5	SN74LS221N			8	16	
IC P1	HA1-4905-5	5		9	1	13
IC P2	HI1-201-5	4		5		13
IC P4	μPC4557C	4				8
IC P5	SN74LS221N			8	16	
IC R01	TL601CP	5		1		8
IC R02	TL601CP	5		1		8
IC R2	TL082CP	4				8
IC R3	BX381	9		6		2
IC R4	NJM4560D	4				8
IC R5	SN75452BP			4	8	
IC S01	TL601CP	5		1		8
IC S02	TL601CP	5		1		8
IC S2	TL084CN	11				4
IC S3	HI1-201-5	4		5		13
IC S4	SN75207BN		13	7	14	
IC S5	μPC319C	6		3, 8		11
IC T1	CX773A			12	24	
IC T2	SN74365AN			8	16	
IC T3	SN74LS164N			7	14	
IC T4	SN74LS164N			7	14	
IC T5	SN74LS164N			7	14	
IC U1	HD10125		8	16	9	
IC U2	SN7404N			7	14	
IC U3	SN74LS164N			7	14	
IC U4	SN74LS00N			7	14	
IC U5	SN74S51N			7	14	
IC V1	SN74LS00N			7	14	
IC V2	SN75207BN		13	7	14	
IC V3	SN74LS221N			8	16	
IC V4	SN7404N			7	14	
IC V5	SN74LS221N			8	16	
IC W2	SN7406N			7	14	
IC W3	SN74265N			8	16	
IC W4	SN74LS163AN			8	16	
IC W5	SN74LS163AN			8	16	
IC X1	CX7905				2	
IC X3	BX381	9		6		2
IC X5	SN74S163N			8	16	
IC Y1	μPC319C	6		3, 8		11
IC Z5	SN74LS221N			8	16	

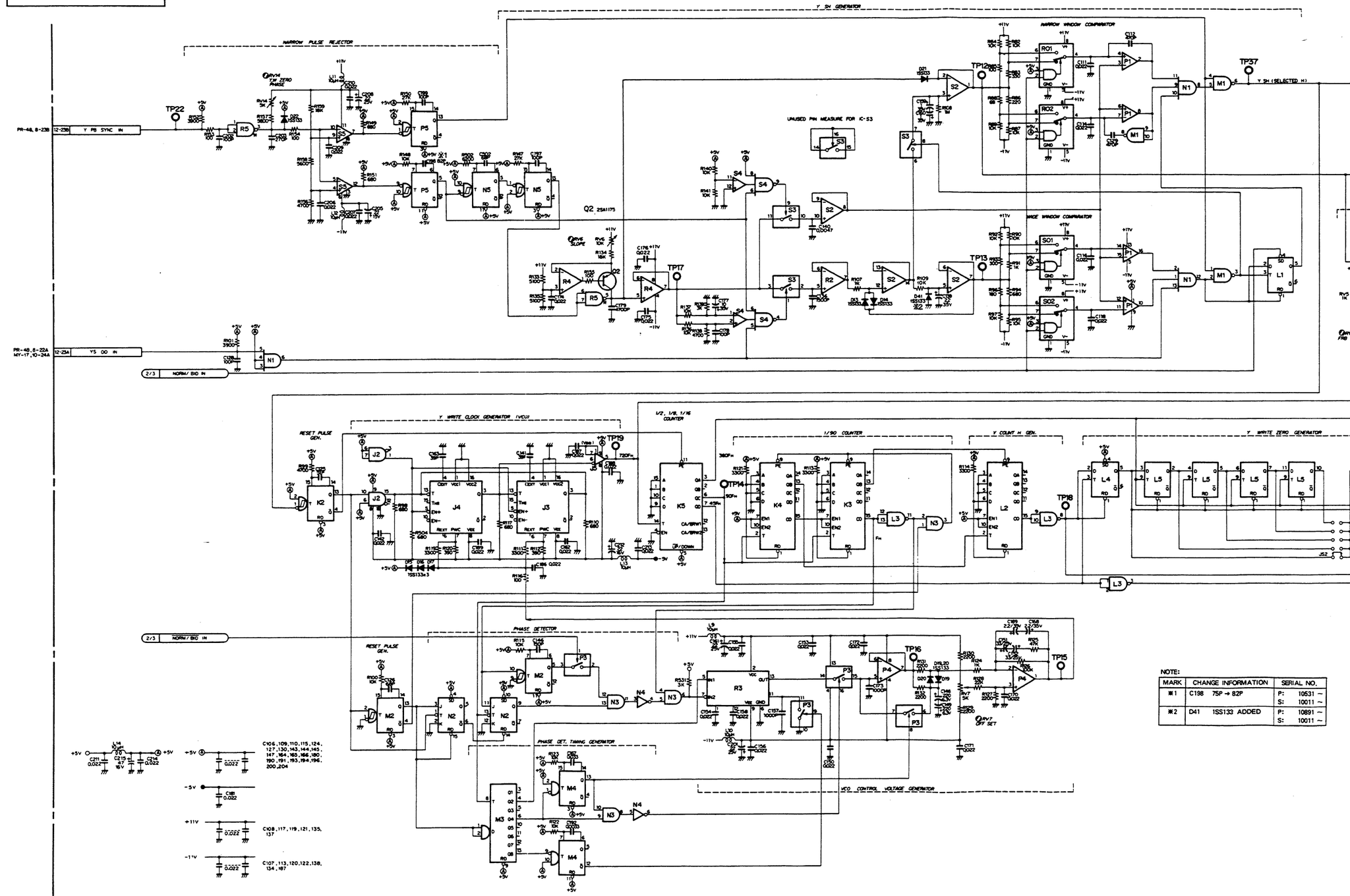




D1	H - 2
D2	H - 2
D3	A - 2
D4	A - 2
D5	A - 2
D7	E - 3
D8	E - 3
D9	G - 3
D10	J - 1
D11	J - 1
D12	K - 1
D13	S - 2
D14	S - 2
D15	J - 2
D16	J - 2
D17	J - 3
D19	N - 3
D20	N - 3
D21	R - 3
D22	R - 5
D23	X - 1
D24	V - 2
D25	X - 2
D26	Y - 2
D27	Y - 3
D28	Y - 3
D29	Y - 4
D30	W - 4
D33	G - 3
D41	S - 2
D42	H - 2
D50	V - 3
IC1	T - 3
IC2	T - 4
IC3	T - 2
Q1	G - 4
Q2	R - 4
Q3	X - 2
Q4	Y - 2
Q5	Y - 2
Q6	Y - 2
Q7	Y - 3
Q8	Y - 3
Q9	Y - 4
RV1	E - 4
RV2	G - 4
RV3	H - 4
RV5	P - 2
RV6	R - 4
RV7	N - 4
RV8	V - 3
RV9	X - 1
RV12	W - 4
RV13	Z - 4
RV14	T - 5
RV20	V - 3
S1	Y - 5
S2	T - 5
TP1	A - 1
TP2	G - 2
TP3	H - 2
TP4	B - 3
TP5	C - 3
TP6	F - 3
TP7	G - 3
TP8	C - 4
TP9	E - 5
TP10	F - 5
TP11	F - 5
TP12	R - 2
TP13	S - 2
TP14	K - 3
TP15	L - 3
TP16	P - 3
TP17	S - 3
TP18	I - 4
TP19	K - 4
TP20	K - 5
TP21	M - 5
TP22	P - 5
TP23	S - 1
TP24	T - 1
TP26	Y - 1
TP27	Y - 1
TP29	W - 3
TP30	U - 4
TP31	V - 4
TP32	Y - 4
TP33	T - 5
TP34	T - 5
TP35	U - 5
TP36	W - 1
TP37	M - 1
TP38	N - 2
TPE1	F - 1
TPE2	B - 5
TPE3	N - 2
TPE4	R - 5
TPE5	X - 5
TPE6	Y - 4

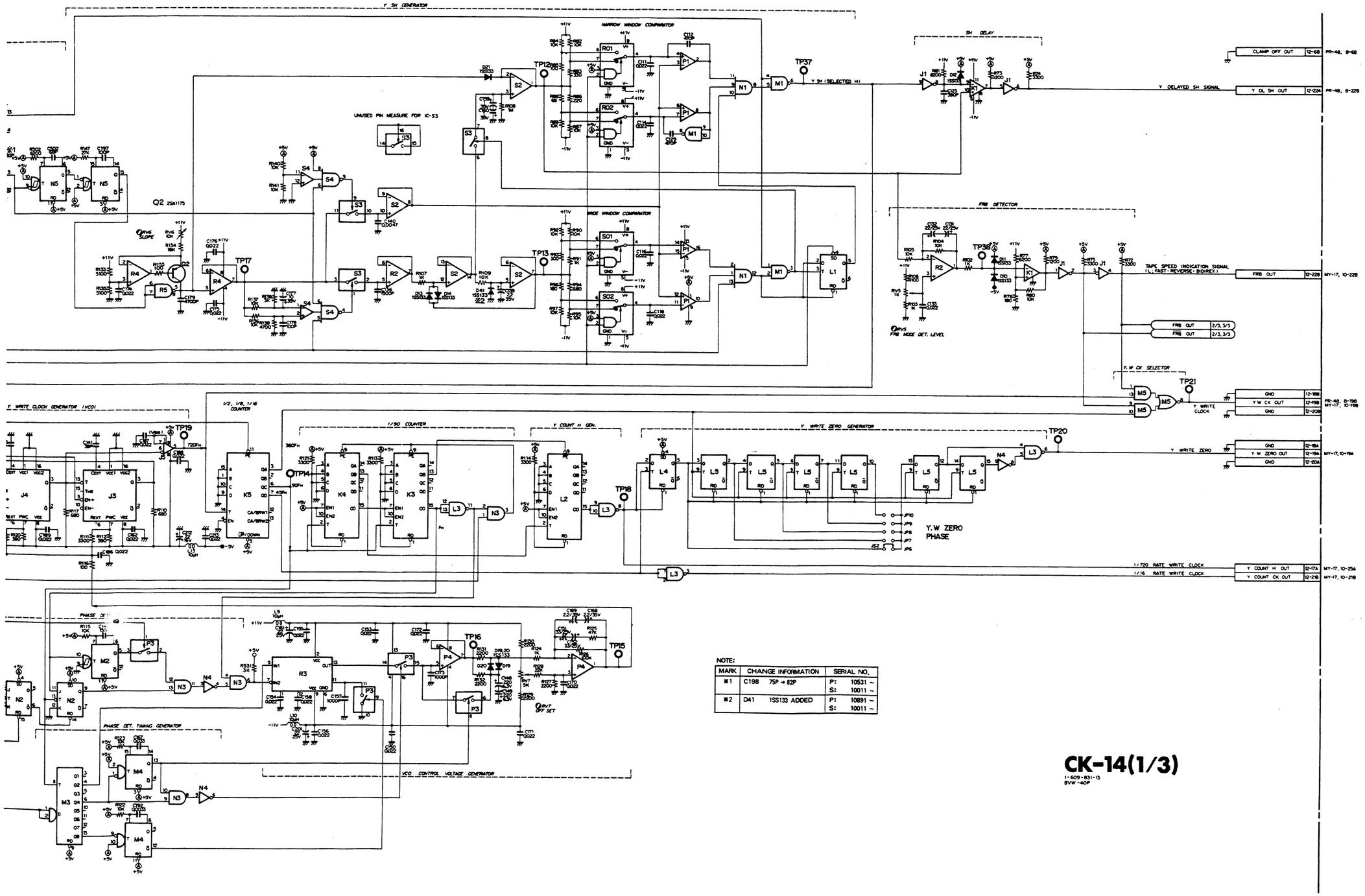
CK-14 (1/3) (VIDEO TBC)

UP TO S/N 11040 (P)
UP TO S/N 10029 (S)



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	C198 75P → 82P	P: 10531 ~ S: 10011 ~
※2	D41 1SS133 ADDED	P: 10891 ~ S: 10011 ~



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	C198 75P → 82P	P: 10531 ~ S: 10011 ~
※2	D41 1SS133 ADDED	P: 10891 ~ S: 10011 ~

CK-14(1/3)

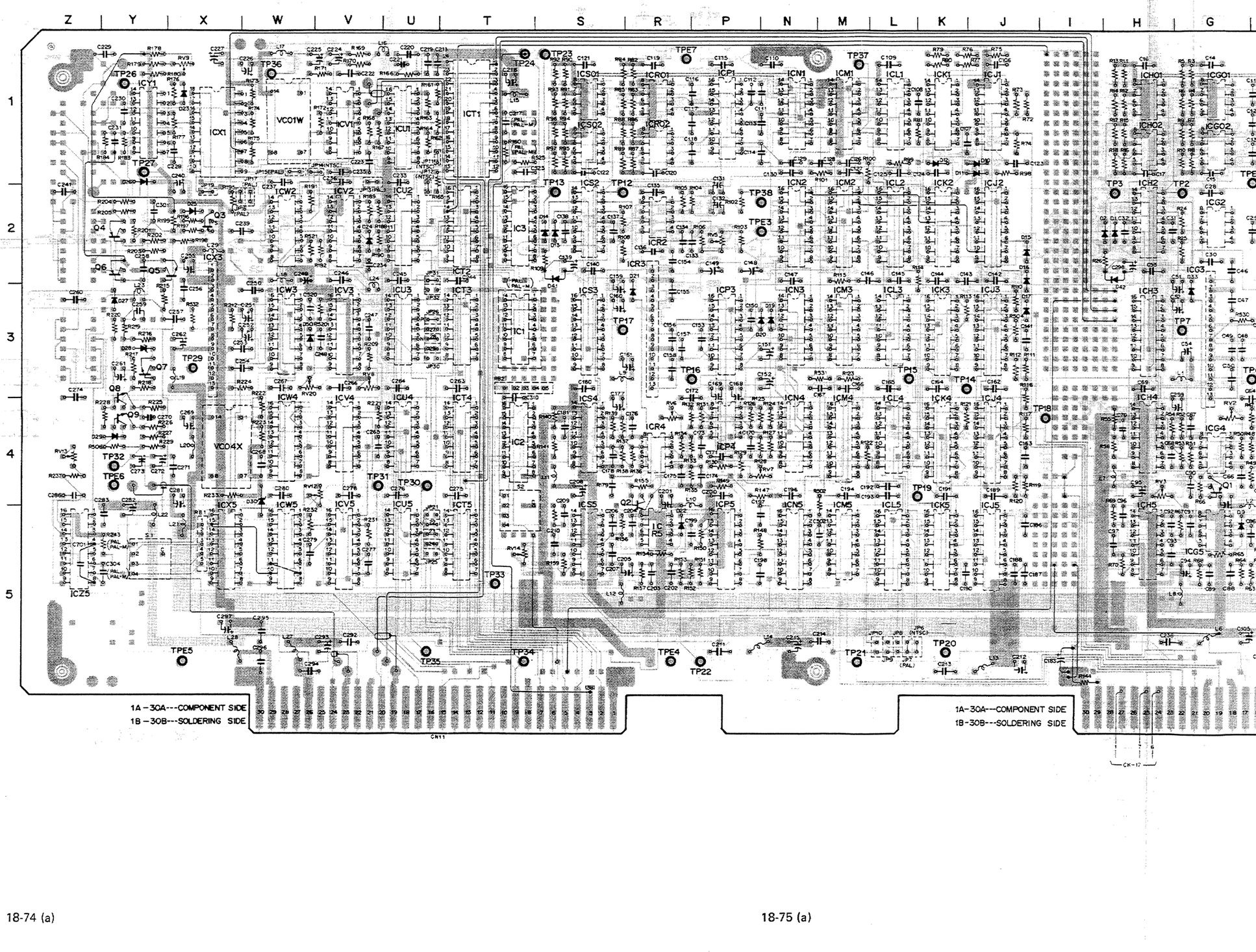
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8VW-40P

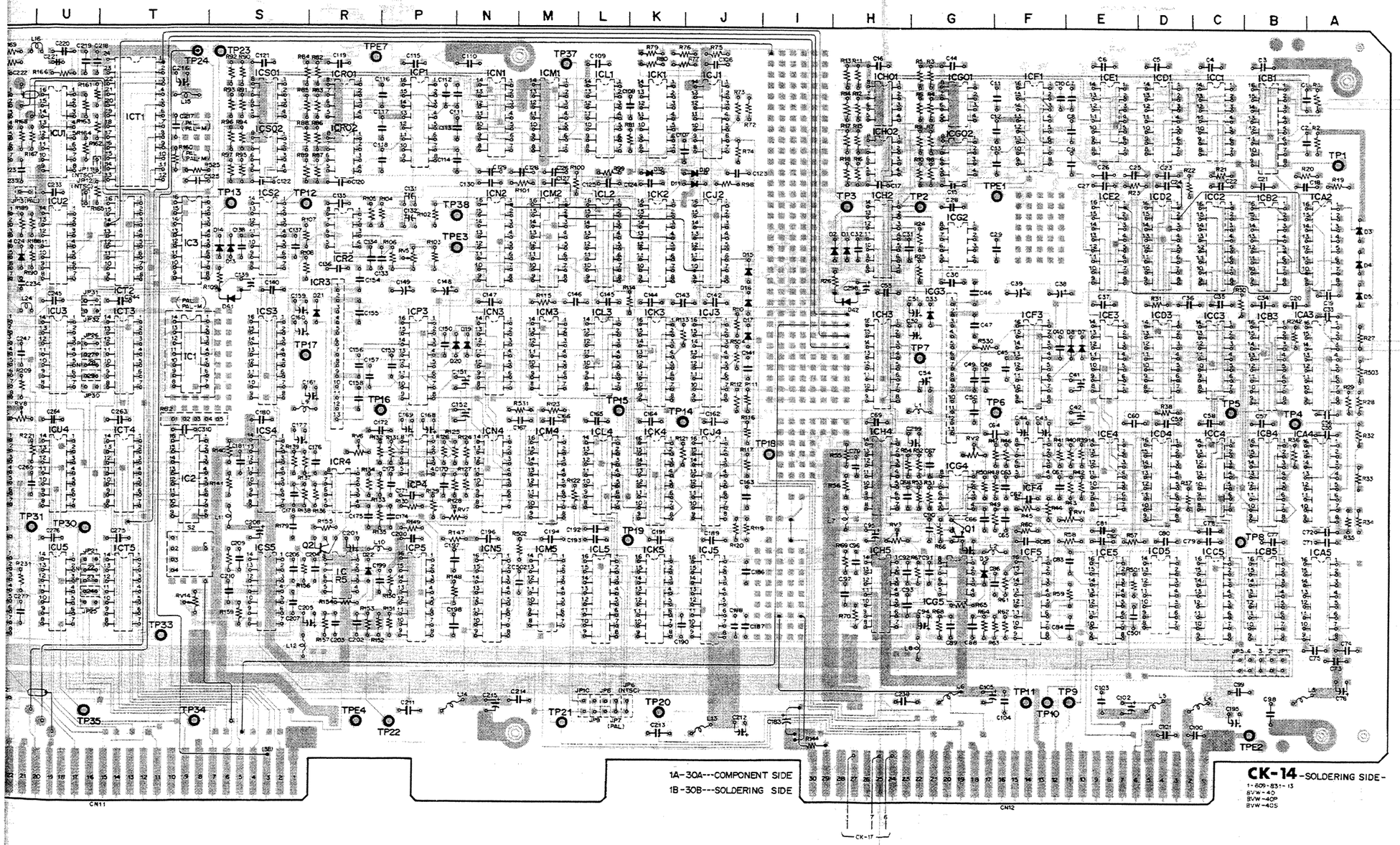
CK-14 CK-14

CK-14 (VIDEO TBC)

UP TO S/N 11040 (P)
UP TO S/N 10029 (S)

Ref. No.	Type	Pin No. −11V	−5V	GND	+5V	+11V
IC 1	SN74LS74AN			7	14	
IC 2						
IC 3	SN74LS123N			8	16	
IC A2	HD10121		8	16	9	
IC A3	MC10198L		8	1, 16		
IC A4	MC10198L		8	1, 16		
IC A5	HD10125		8	16	9	
IC B1	SN74LS625N			8	16	
IC B2	SN74LS221N			8	16	
IC B3	SN74LS163AN			8	16	
IC B4	SN74S163N			8	16	
IC B5	SN74191N			8	16	
IC C1	SN74LS74AN			7	14	
IC C2	SN74LS162AN			8	16	
IC C3	SN7400N			7	14	
IC C4	SN74LS74AN			7	14	
IC C5	SN74LS174N			8	16	
IC D1	SN74LS00N			7	14	
IC D2	SN74LS221N			8	16	
IC D3	SN74LS164N			7	14	
IC D4	SN74LS123N			8	16	
IC D5	SN74S51N			7	14	
IC E1	SN74LS11N			7	14	
IC E2	SN74LS112AN			8	16	
IC E3	SN74LS08N			7	14	
IC E4	SN74LS04N			7	14	
IC E5	SN74LS221N			8	16	
IC F1	HA1-4605-5	5		9	1	13
IC F3	HI1-201-5	1		5		13
IC F4	μPC1557C	4				8
IC F5	SN74LS221N			8	16	
IC G01	TL601CP	5		1		8
IC G02	TL601CP	5		1		8
IC G1	TL082CP	4				8
IC G3	BX381	9		6		2
IC G4	NJM4560D	4				8
IC G5	SN75452BP			4	8	
IC H01	TL601CP	5		1		8
IC H02	TL601CP	5		1		8
IC H2	TL084CN	11				4
IC H3	HI1-201-5	4		5		13
IC H4	SN75207BN		13	7	14	
IC H5	μPC319C	6		3, 8		11
IC J1	SN7406N			7	14	
IC J2	HD10121		8	16	9	
IC J3	MC10198L		8	1, 16		
IC J4	MC10198L		8	1, 16		
IC J5	HD10125		8	16	9	
IC K1	μPC319C	6		3, 8		11
IC K2	SN74LS22AN			8	16	
IC K3	SN74LS163AN			8	16	
IC K4	SN74S163N			8	16	
IC K5	SN74191N			8	16	
IC L1	SN74LS74AN		7	14		
IC L2	SN74LS163AN			8	16	
IC L3	SN7400N			7	14	
IC L4	SN74LS74AN			7	14	
IC L5	SN74LS174N			8	16	
IC M1	SN74LS00N			7	14	
IC M2	SN74LS221N			8	16	
IC M3	SN74LS164N			7	14	
IC M4	SN74LS162N			8	16	
IC M5	SN74S51N			7	14	
IC N1	SN74LS11N			7	14	
IC N2	SN74LS112AN			8	16	
IC N3	SN74LS08N			7	14	
IC N4	SN74LS04N			7	14	
IC N5	SN74LS221N			8	16	
IC P1	HA1-4605-5	5		9	1	13
IC P3	HI1-201-5	4		5		13
IC P4	μPC4557C	4				8
IC P5	SN74LS221N			8	16	
IC R01	TL601CP	5		1		8
IC R02	TL601CP	5		1		8
IC R2	TL082CP	4				8
IC R3	BX381	9		6		2
IC R4	NJM4560D	4				8
IC R5	SN75452BP			4	8	
IC S01	TL601CP	5		1		8
IC S02	TL601CP	5		1		8
IC S2	TL084CN	11				4
IC S3	HI1-201-5	4		5		13
IC S4	SN75207BN		13	7	14	
IC S5	μPC319C	6		3, 8		11
IC T1	CX773A			12	24	
IC T2	SN74365AN			8	16	
IC T3	SN74LS164N			7	14	
IC T4	SN74LS164N			7	14	
IC T5	SN74LS164N			7	14	
IC U1	HD10125		8	16	9	
IC U2	SN7404N			7	14	
IC U3	SN74LS164N			7	14	
IC U4	SN74LS00N			7	14	
IC U5	SN74S51N			7	14	
IC V1	SN74LS00N			7	14	
IC V2	SN75207BN		13	7	14	
IC V3	SN74LS221N			8	16	
IC V4	SN7404N			7	14	
IC V5	SN74LS221N			8	16	
IC W2	SN7406N			7	14	
IC W3	SN74248N			8	16	
IC W4	SN74LS163AN			8	16	
IC W5	SN74LS163AN			8	16	
IC X1	CX7903			1	2	
IC X3	BX381	9		6		2
IC X5	SN74S163N			8	16	
IC Y1	μPC319C	6		3, 8		11
IC Z5	SN74LS221N			8	16	

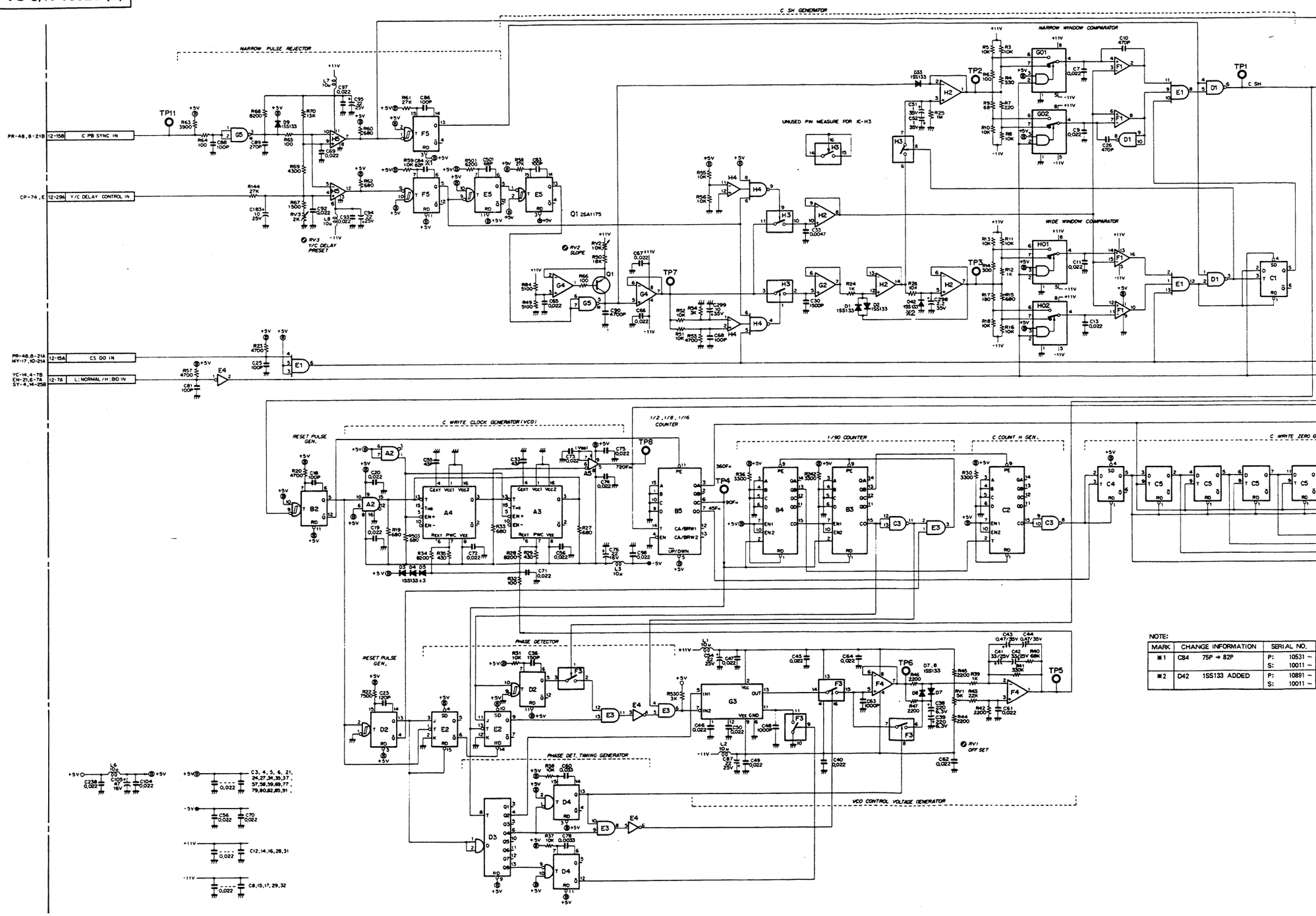




D1	H - 2
D2	H - 2
D3	A - 2
D4	A - 2
D5	E - 3
D6	E - 3
D9	E - 5
D10	J - 1
D11	J - 1
D12	K - 1
D13	S - 2
D14	S - 2
D15	J - 2
D16	J - 2
D17	J - 3
D19	N - 3
D20	N - 3
D21	R - 3
D23	R - 5
D24	V - 2
D25	X - 2
D26	Y - 2
D27	Y - 3
D28	Y - 3
D29	W - 4
D30	W - 3
D33	G - 3
D41	S - 2
D42	H - 2
D50	V - 3
IC1	T - 3
IC2	T - 2
IC3	G - 4
IC4	G - 4
IC5	X - 2
IC6	Y - 2
IC7	Y - 2
IC8	Y - 3
IC9	Y - 4
RV1	E - 4
RV2	G - 4
RV3	H - 4
RV5	P - 2
RV6	R - 4
RV7	N - 4
RV8	V - 3
RV9	X - 1
RV12	W - 4
RV13	Z - 4
RV14	T - 5
RV20	V - 3
S1	Y - 5
S2	T - 5
TP1	A - 1
TP2	G - 2
TP3	H - 2
TP4	B - 3
TP5	C - 3
TP6	F - 3
TP7	G - 3
TP8	C - 4
TP9	E - 5
TP10	F - 5
TP11	F - 5
TP12	R - 2
TP13	S - 2
TP14	K - 3
TP15	L - 3
TP16	P - 3
TP17	S - 3
TP18	I - 4
TP19	K - 4
TP20	K - 5
TP21	M - 5
TP22	P - 5
TP23	S - 1
TP24	T - 1
TP26	Y - 1
TP27	Y - 1
TP29	W - 3
TP30	U - 4
TP31	V - 4
TP32	Y - 4
TP33	T - 5
TP34	T - 5
TP35	U - 5
TP36	W - 1
TP37	M - 1
TP38	N - 2
TPE1	F - 1
TPE2	B - 5
TPE3	N - 2
TPE4	R - 5
TPE5	X - 5
TPE6	Y - 4

CK-14 (2/3) (VIDEO TBC)

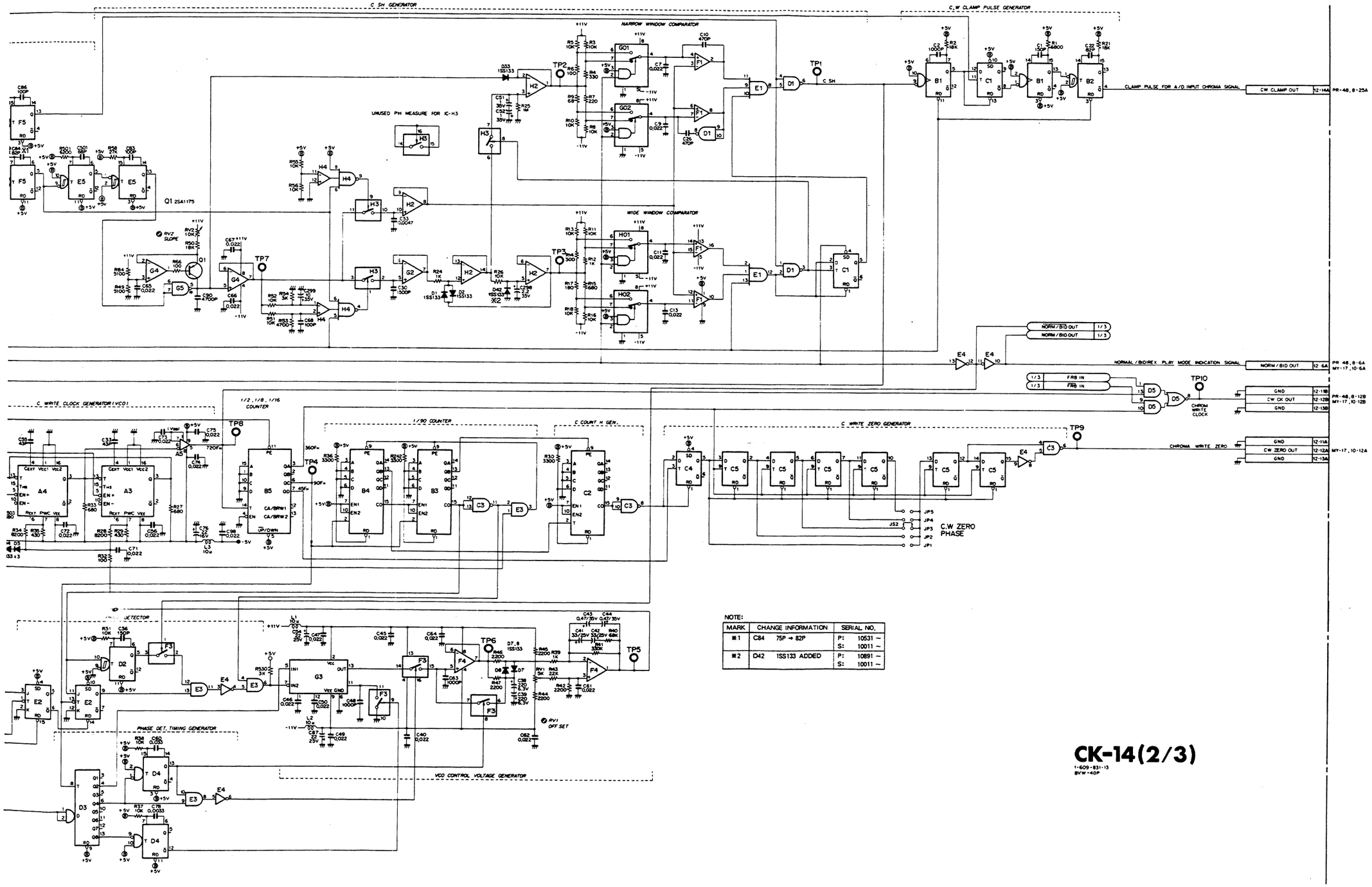
UP TO S/N 11040 (P)
UP TO S/N 10029 (S)



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	C84 75P → 82P	P: 10531 ~
		S: 10011 ~
※2	D42 1SS133 ADDED	P: 10891 ~
		S: 10011 ~

CK-14 (2/3)
CK-14 (2/3)



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	C84 75P → 82P	P: 10531 ~ S: 10011 ~
※2	D42 1SS133 ADDED	P: 10891 ~ S: 10011 ~

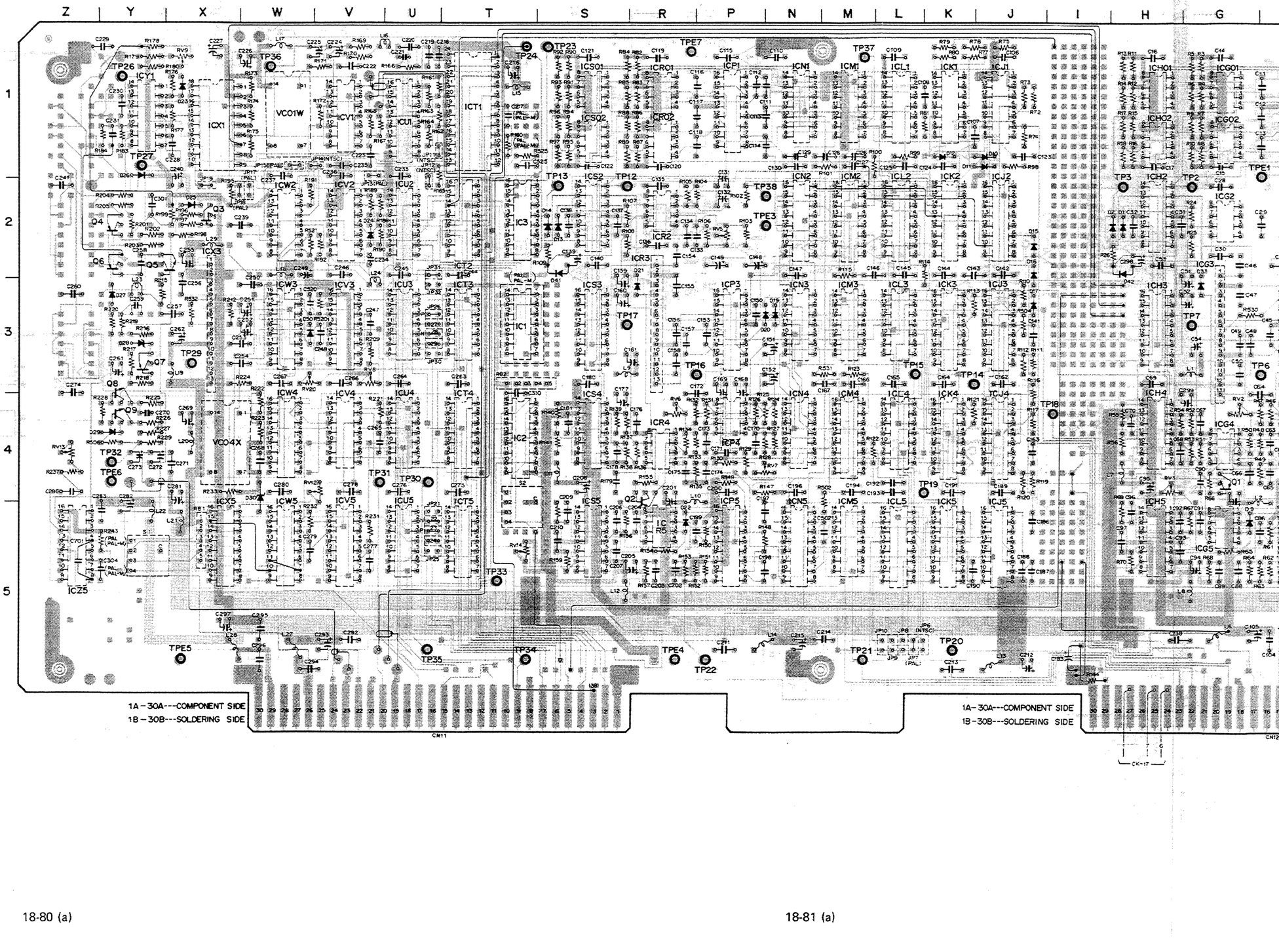
CK-14(2/3)

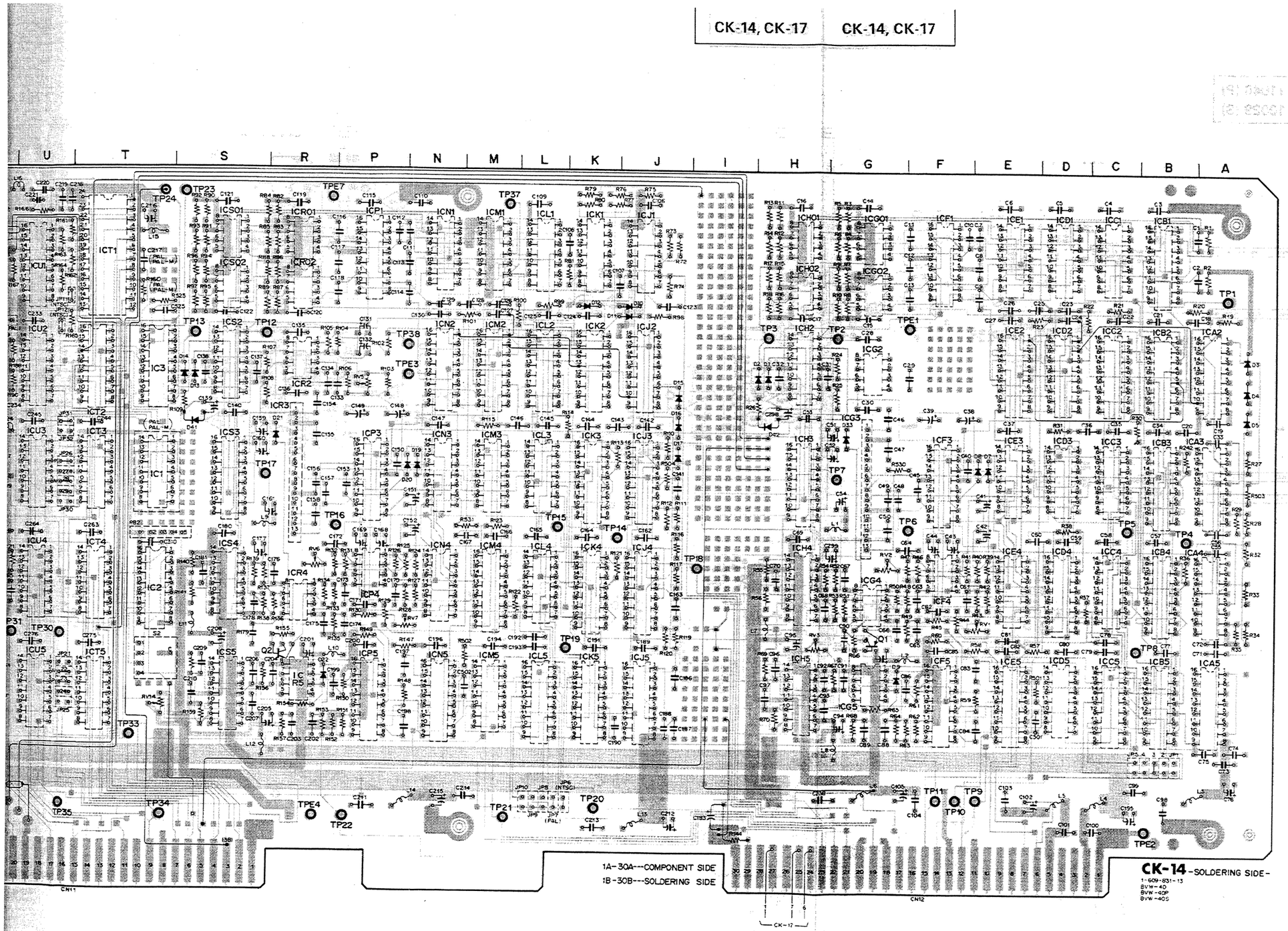
1-609-831-13
BVW-40P

CK-14, CK-17 CK-14, CK-1

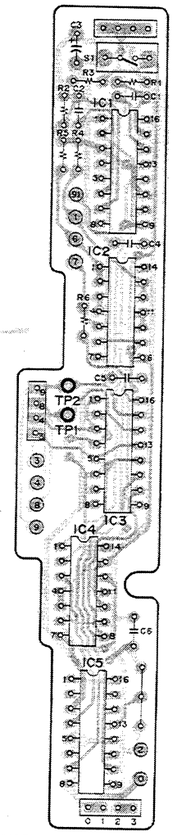
CK-14 (VIDEO TBC) | **UP TO S/N 11040 (P)**
CK-17 | **UP TO S/N 10029 (S)**

Ref. No.	Type	Pin No. −11V	−5V	GND	+5V	+11V
IC 1	SN74LS74AN			7	14	
IC 2						
IC 3	SN74LS122N			8	16	
IC A2	HD10124		8	16	9	
IC A3	MC10198L		8	1, 16		
IC A4	MC10198L		8	1, 16		
IC A5	HD10125		8	16	9	
IC B1	SN74LS422N			8	16	
IC B2	SN74LS221N			8	16	
IC B3	SN74LS163AN			8	16	
IC B4	SN74S163N			8	16	
IC B5	SN74191N			8	16	
IC C1	SN74LS74AN			7	14	
IC C2	SN74LS163AN			8	16	
IC C3	SN7400N			7	14	
IC C4	SN74LS74AN			7	14	
IC C5	SN74LS174N			8	16	
IC D1	SN74LS00N			7	14	
IC D2	SN74LS221N			8	16	
IC D3	SN74LS164N			7	14	
IC D4	SN74LS123N			8	16	
IC D5	SN74S51N			7	14	
IC E1	SN74LS11N			7	14	
IC E2	SN74LS112AN			8	16	
IC E3	SN74LS08N			7	14	
IC E4	SN74LS04N			7	14	
IC E5	SN74LS221N			8	16	
IC F1	HA1-4905-5	5		9	1	13
IC F2	HI1-201-5	4		5		13
IC F4	μPC4557C	4				8
IC F5	SN74LS221N			8	16	
IC G01	TL601CP	5		1		8
IC G02	TL601CP	5		1		8
IC G2	TL082CP	4				8
IC G3	BX361	9		6		2
IC G4	NJM4560D	4				8
IC G5	SN75452BP			4	8	
IC H01	TL601CP	5		1		8
IC H02	TL601CP	5		1		8
IC H2	TL064CN	11				4
IC H3	HI1-201-5	4		5		13
IC H4	SN75207BN		13	7	14	
IC H5	μPC319C	6		3, 8		11
IC J1	SN7406N			7	14	
IC J2	HD10124		8	16	9	
IC J3	MC10198L		8	1, 16		
IC J4	MC10198L		8	1, 16		
IC J5	HD10125		8	16	9	
IC K1	μPC319C	6		3, 8		11
IC K2	SN74LS22AN			8	16	
IC K3	SN74LS163AN			8	16	
IC K4	SN74S163N			8	16	
IC K5	SN74191N			8	16	
IC L1	SN74LS74AN		7	14		
IC L2	SN74LS163AN			8	16	
IC L3	SN7400N			7	14	
IC L4	SN74LS74AN			7	14	
IC L5	SN74LS174N			8	16	
IC M1	SN74LS00N			7	14	
IC M2	SN74LS221N			8	16	
IC M3	SN74LS164N			7	14	
IC M4	SN74LS123N			8	16	
IC M5	SN74S51N			7	14	
IC N1	SN74LS11N			7	14	
IC N2	SN74LS112AN			8	16	
IC N3	SN74LS08N			7	14	
IC N4	SN74LS04N			7	14	
IC N5	SN74LS221N			8	16	
IC P1	HA1-4905-5	5		9	1	13
IC P3	HI1-201-5	4		5		13
IC P4	μPC4557C	4				8
IC P5	SN74LS221N			8	16	
IC R01	TL601CP	5		1		8
IC R02	TL601CP	5		1		8
IC R2	TL082CP	4				8
IC R3	BX361	9		6		2
IC R4	NJM4560D	4				8
IC R5	SN75452BP			4	8	
IC S01	TL601CP	5		1		8
IC S02	TL601CP	5		1		8
IC S2	TL084CN	11				4
IC S3	HI1-201-5	4		5		13
IC S4	SN75207BN		13	7	14	
IC S5	μPC319C	6		3, 8		11
IC T1	CX773A			12	24	
IC T2	SN74368AN			8	16	
IC T3	SN74LS164N			7	14	
IC T4	SN74LS164N			7	14	
IC T5	SN74LS164N			7	14	
IC U1	HD10125		8	16	9	
IC U2	SN7404N			7	14	
IC U3	SN74LS164N			7	14	
IC U4	SN74LS00N			7	14	
IC U5	SN74S51N			7	14	
IC V1	SN74LS00N			7	14	
IC V2	SN75207BN		13	7	14	
IC V3	SN74LS221N			8	16	
IC V4	SN7404N			7	14	
IC V5	SN74LS221N			8	16	
IC W2	SN7406N			7	14	
IC W3	SN74S86N			8	16	
IC W4	SN74LS163AN			8	16	
IC W5	SN74LS163AN			8	16	
IC X1	CX7903				2	
IC X3	BX381	9		6		2
IC X5	SN74S163N			8	16	
IC Y1	μPC319C	6		3, 8		11
IC Z3	SN74LS221N			8	16	



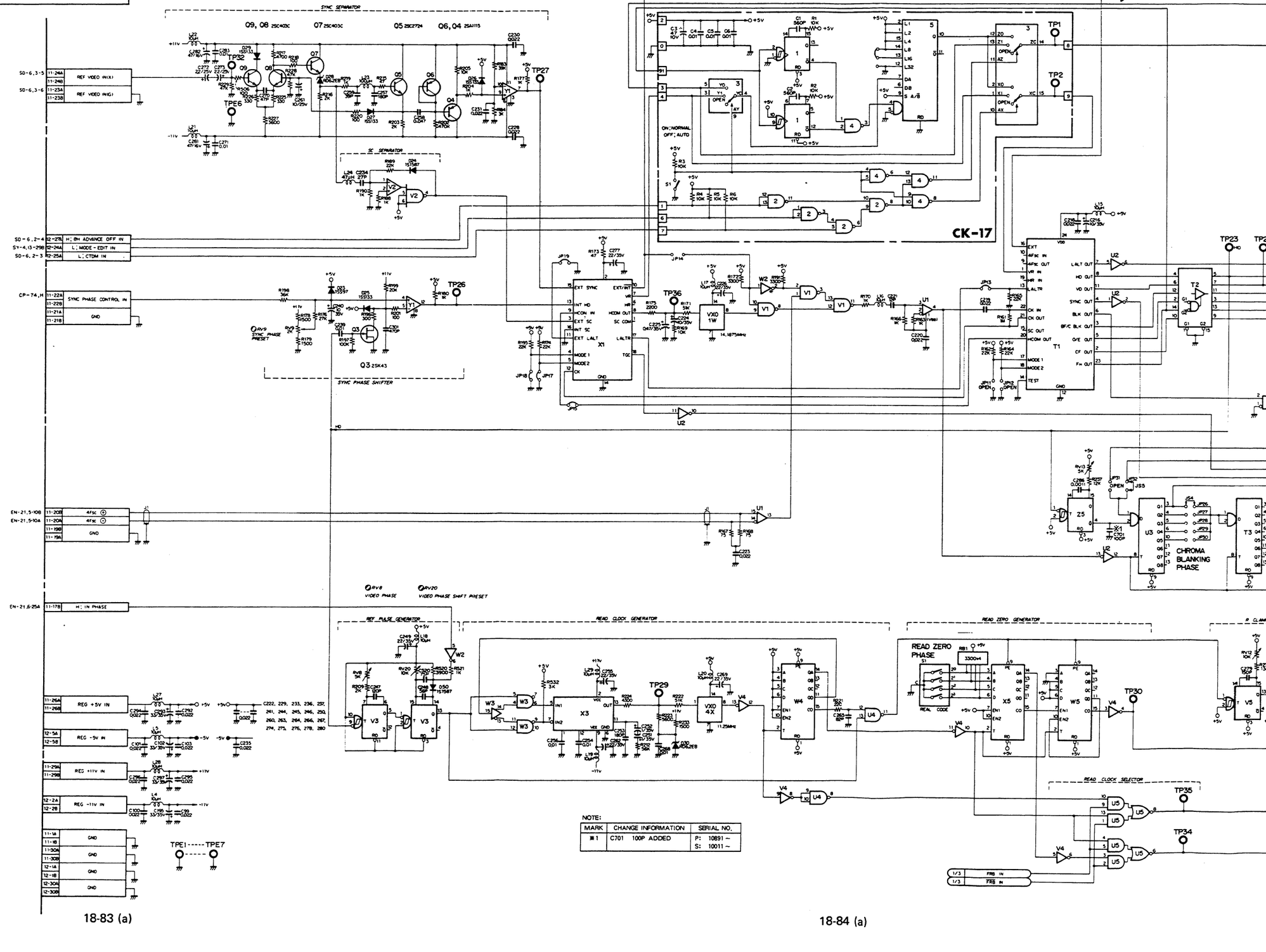


D1	H - 2
D2	H - 2
D3	A - 2
D4	A - 2
D5	E - 3
D6	E - 3
D8	G - 5
D9	J - 1
D10	J - 1
D12	K - 1
D13	S - 2
D14	S - 2
D15	J - 2
D16	J - 2
D17	J - 3
D18	J - 3
D19	N - 3
D20	N - 3
D21	R - 1
D22	R - 5
D23	V - 1
D24	V - 2
D25	V - 2
D26	V - 3
D27	V - 3
D28	V - 3
D29	V - 4
D30	W - 4
D31	G - 3
D32	S - 2
D33	E - 2
D50	T - 3
IC1	T - 3
IC2	T - 4
IC3	T - 2
IC4	G - 4
IC5	R - 4
Q1	X - 2
Q2	Y - 2
Q3	Y - 2
Q4	Y - 2
Q5	Y - 3
Q6	Y - 3
Q7	Y - 4
RV1	E - 4
RV2	G - 4
RV3	H - 4
RV5	P - 2
RV6	R - 4
RV7	T - 4
RV8	V - 3
RV9	X - 1
RV12	W - 4
RV13	Z - 4
RV14	T - 5
RV20	V - 3
S1	Y - 5
S2	T - 5
TP1	A - 1
TP2	G - 2
TP3	H - 2
TP4	B - 3
TP5	C - 3
TP6	F - 3
TP7	G - 3
TP8	C - 4
TP9	E - 5
TP10	F - 5
TP11	F - 5
TP12	B - 2
TP13	S - 2
TP14	K - 3
TP15	L - 3
TP16	P - 3
TP17	S - 3
TP18	I - 4
TP19	K - 4
TP20	K - 5
TP21	M - 5
TP22	P - 5
TP23	S - 1
TP24	T - 1
TP26	Y - 1
TP27	Y - 1
TP29	W - 3
TP30	U - 4
TP31	V - 4
TP32	Y - 4
TP33	T - 5
TP34	T - 5
TP35	C - 5
TP36	W - 1
TP37	M - 1
TP38	N - 2
TPE1	F - 1
TPE2	B - 5
TPE3	N - 2
TPE4	R - 5
TPE5	X - 5
TPE6	Y - 4



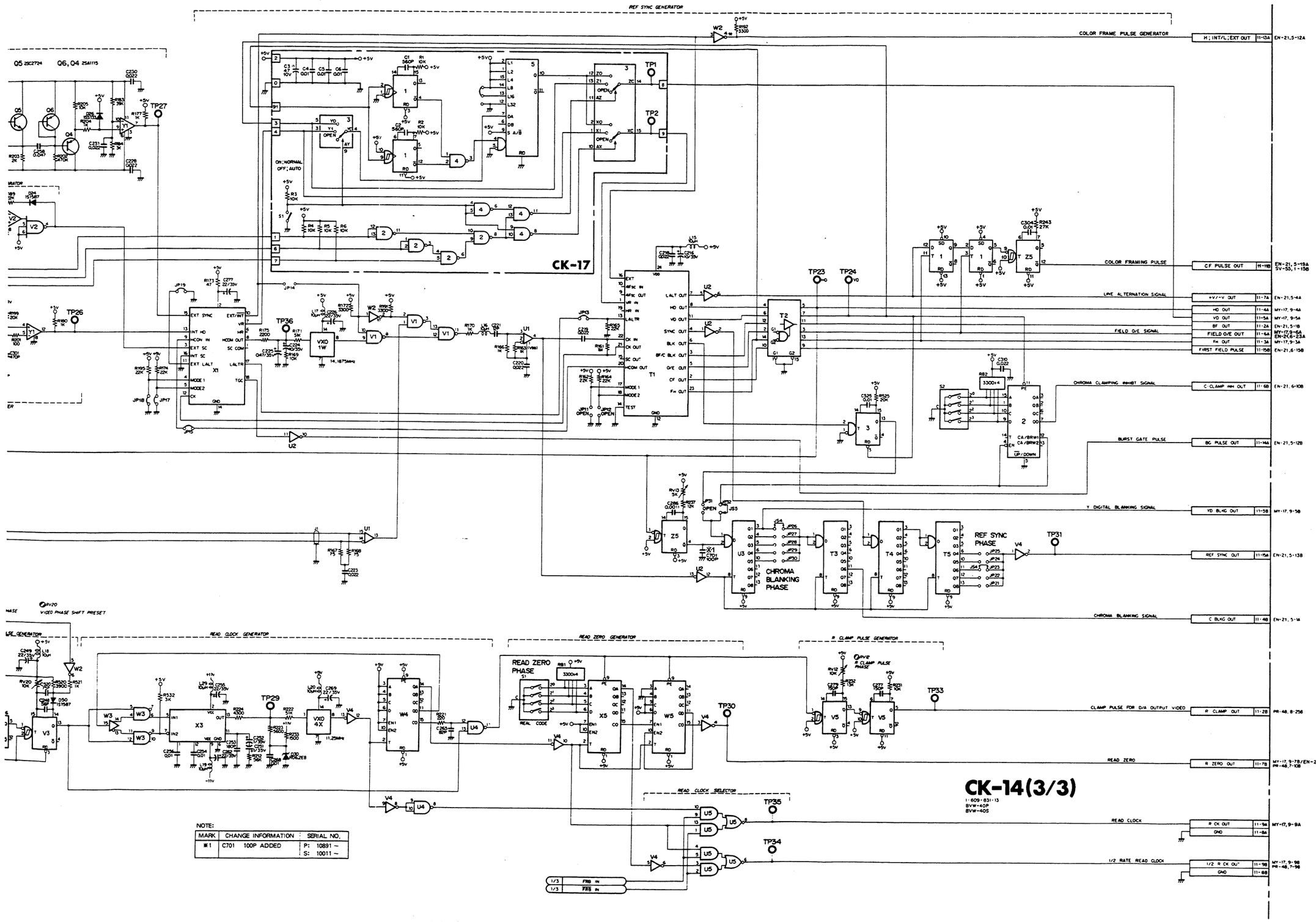
CK-14 (3/3) (VIDEO TBC)

UP TO S/N 11040 (P)
UP TO S/N 10029 (S)



18-83 (a)

18-84 (a)

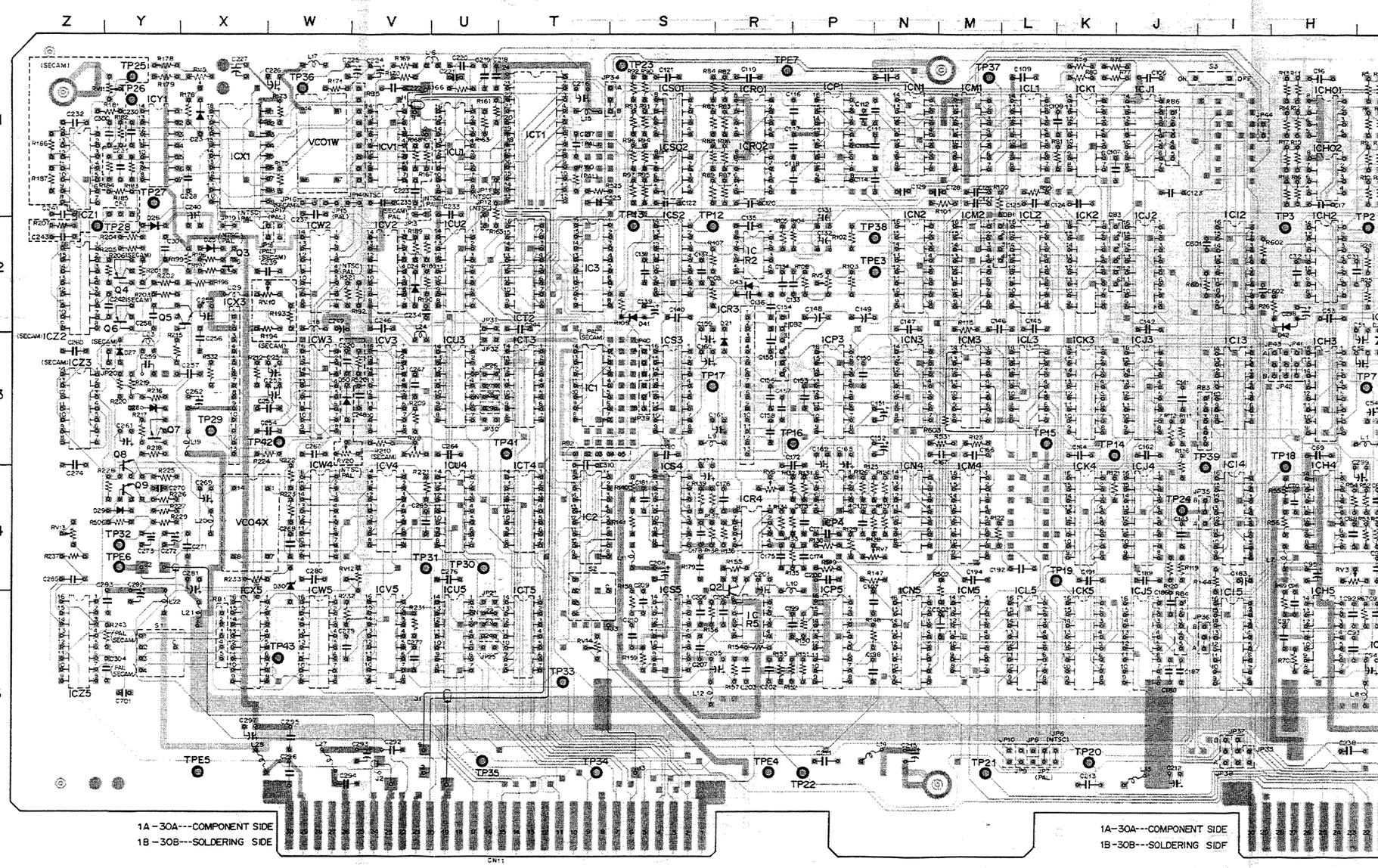

REF SYNC GENERATOR
CK-17
COLOR FRAME PULSE GENERATOR
H ; INT/L ; EXT OUT
COLOR FRAMING PULSE
CF PULSE OUT
LINE ALTERNATION SIGNAL
+V/-V OUT
FIELD O/E SIGNAL
HD OUT
VD OUT
BF OUT
FIELD O/E OUT
FH OUT
FIRST FIELD PULSE
CHROMA CLAMPING PULSE
C CLAMP PULSE OUT
BURST GATE PULSE
BG PULSE OUT
Y DIGITAL BLANKING SIGNAL
YD BLNG OUT
REF SYNC PHASE
REF SYNC OUT
CHROMA BLANKING PHASE
CHROMA BLANKING SIGNAL
C BLNG OUT
READ CLOCK GENERATOR
READ ZERO GENERATOR
READ ZERO PHASE
R CLAMP PULSE GENERATOR
CLAMP PULSE FOR D/A OUTPUT VIDEO
R CLAMP OUT
READ ZERO
R ZERO OUT
READ CLOCK SELECTOR
READ CLOCK
R CK OUT
GND
1/2 RATE READ CLOCK
1/2 R CK OUT
CK-14(3/3)
1-609-831-13
BVW-40P
BVW-40S
NOTE:
MARK | CHANGE INFORMATION | SERIAL NO.
※1 | C701 100P ADDED | P: 10891 ~ S: 10011 ~

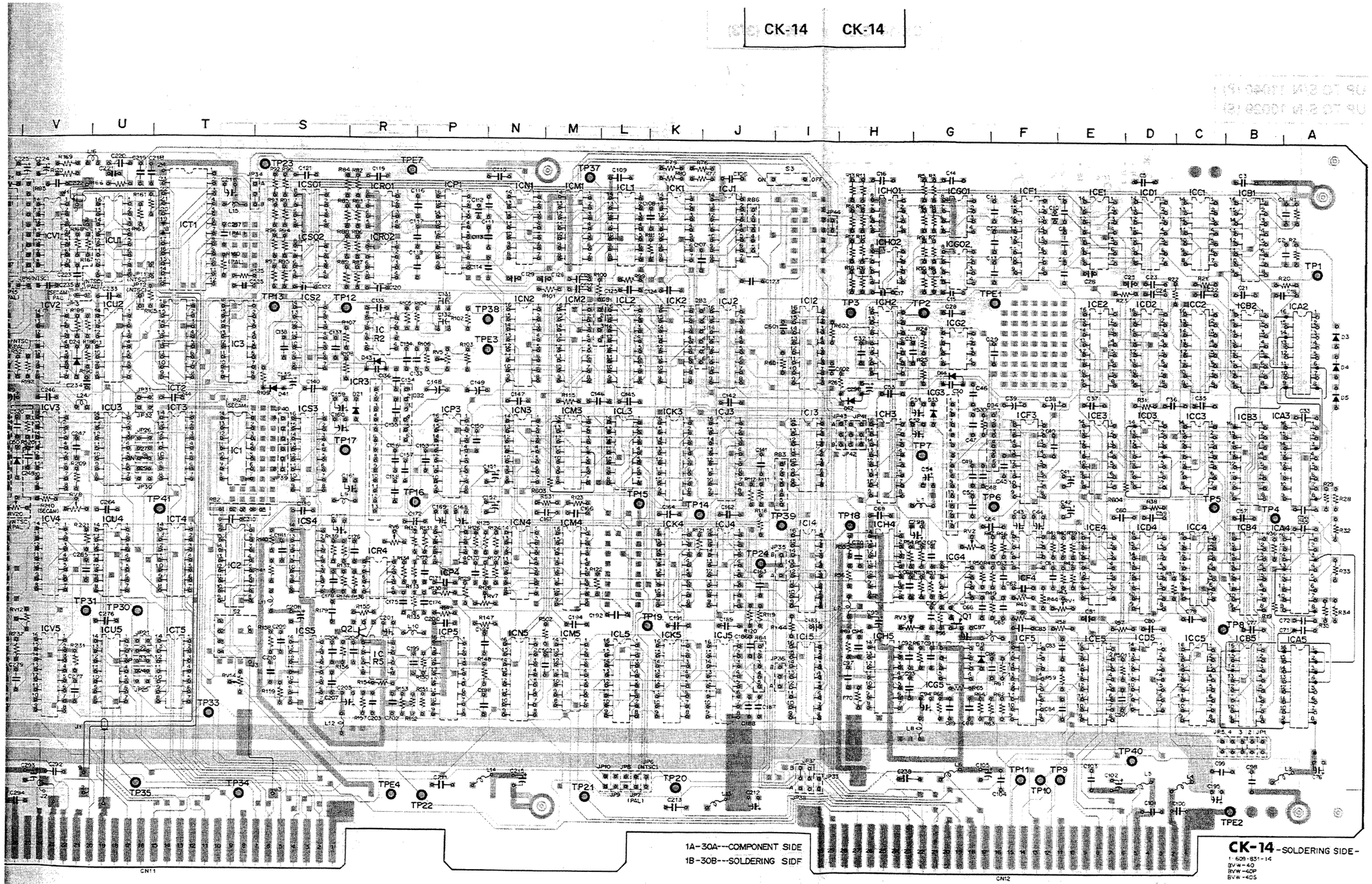
CK-14 CK-14

CK-14 (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10030 AND LATER (S)

Ref. No.	Type	Pin No.				
		−11V	−5V	GND	+5V	+11V
IC 1	SN74LS74AN			7	14	
IC 2						
IC 3	SN74LS123N			8	16	
IC A2	HD10124		8	16	9	
IC A3	MC10198L		8	1, 16		
IC A4	MC10198L		8	1, 16		
IC A5	HD10125		8	16	9	
IC B1	SN74LS123N			8	16	
IC B2	SN74LS221N			8	16	
IC B3	SN74LS163AN			8	16	
IC B4	SN74S163N			8	16	
IC B5	SN74191N			8	16	
IC C1	SN74LS74AN			7	14	
IC C2	SN74LS163AN			8	16	
IC C3	SN7400N			7	14	
IC C4	SN74LS74AN			7	14	
IC C5	SN74LS174N			8	16	
IC D1	SN74LS00N			7	14	
IC D2	SN74LS221N			8	16	
IC D3	SN74LS164N			7	14	
IC D4	SN74LS123N			8	16	
IC D5	SN74S51N			7	14	
IC E1	SN74LS11N			7	14	
IC E2	SN74LS112AN			8	16	
IC E3	SN74LS08N			7	14	
IC E4	SN74LS04N			7	14	
IC E5	SN74LS221N			8	16	
IC F1	HA1-4905-5	5		9	1	13
IC F3	HI-201-5	4		5		13
IC F4	μPC4557C	4				8
IC F5	SN74LS221N			8	16	
IC G01	TL601CP	5		1		8
IC G02	TL601CP	5		1		8
IC G2	TL082CP	4				8
IC G3	BX381	9		6		2
IC G4	NJM4560D	4				8
IC G5	SN75452BP			4	8	
IC H01	TL601CP	5		1		8
IC H02	TL601CP	5		1		8
IC H2	TL084CN	11				4
IC H3	HI-201-5	4		5		13
IC H4	SN75207BN		13	7	14	
IC H5	μPC319C	6		3, 8		11
IC J1	SN7406N			7	14	
IC J2	HD10124		8	16	9	
IC J3	MC10198L		8	1, 16		
IC J4	MC10198L		8	1, 16		
IC J5	HD10125		8	16	9	
IC K1	μPC319C	6		3, 8		11
IC K2	SN74LS221AN			8	16	
IC K3	SN74LS163AN			8	16	
IC K4	SN74S162N			8	16	
IC K5	SN74191N			8	16	
IC L1	SN74LS74AN		7	14		
IC L2	SN74LS163AN			8	16	
IC L3	SN7400N			7	14	
IC L4	SN74LS74AN			7	14	
IC L5	SN74LS174N			8	16	
IC M1	SN74LS00N			7	14	
IC M2	SN74LS221N			8	16	
IC M3	SN74LS164N			7	14	
IC M4	SN74LS123N			8	16	
IC M5	SN74S51N			7	14	
IC N1	SN74LS11N			7	14	
IC N2	SN74LS112AN			8	16	
IC N3	SN74LS08N			7	14	
IC N4	SN74LS04N			7	14	
IC N5	SN74LS221N			8	16	
IC P1	HA1-4905-5	5		9	1	13
IC P3	HI-201-5	4		5		13
IC P4	μPC4557C	4				8
IC P5	SN74LS221N			8	16	
IC R01	TL601CP	5		1		8
IC R02	TL601CP	5		1		8
IC R2	TL082CP	4				8
IC R3	BX381	9		6		2
IC R4	NJM4560D	4				8
IC R5	SN75452BP			4	8	
IC S01	TL601CP	5		1		8
IC S02	TL601CP	5		1		8
IC S2	TL084CN	11				4
IC S3	HI-201-5	4		5		13
IC S4	SN75207BN		13	7	14	
IC S5	μPC319C	6		3, 8		11
IC T1	CX773A			12	24	
IC T2	SN74365AN			8	16	
IC T3	SN74LS164N			7	14	
IC T4	SN74LS164N			7	14	
IC T5	SN74LS164N			7	14	
IC U1	HD10125		8	16	9	
IC U2	SN7404N			7	14	
IC U3	SN74LS164N			7	14	
IC U4	SN74LS00N			7	14	
IC U5	SN74S51N			7	14	
IC V1	SN74LS00N			7	14	
IC V2	SN75207BN		13	7	14	
IC V3	SN74LS221N			8	16	
IC V4	SN7404N			7	14	
IC V5	SN74LS221N			8	16	
IC W2	SN7406N			7	14	
IC W3	SN74265N			8	16	
IC W4	SN74LS163AN			8	16	
IC W5	SN74LS163AN			8	16	
IC X1	CX7902				2	
IC X3	BX381	9		6		2
IC X5	SN74S163N			8	16	
IC Y1	μPC319C	6		3, 8		11
IC Z1	SN75207BN		13	7	14	
IC Z2	SN74LS221N			8	16	
IC Z3	SN74LS74AN		7	14		
IC Z5	SN74LS221N			8	16	

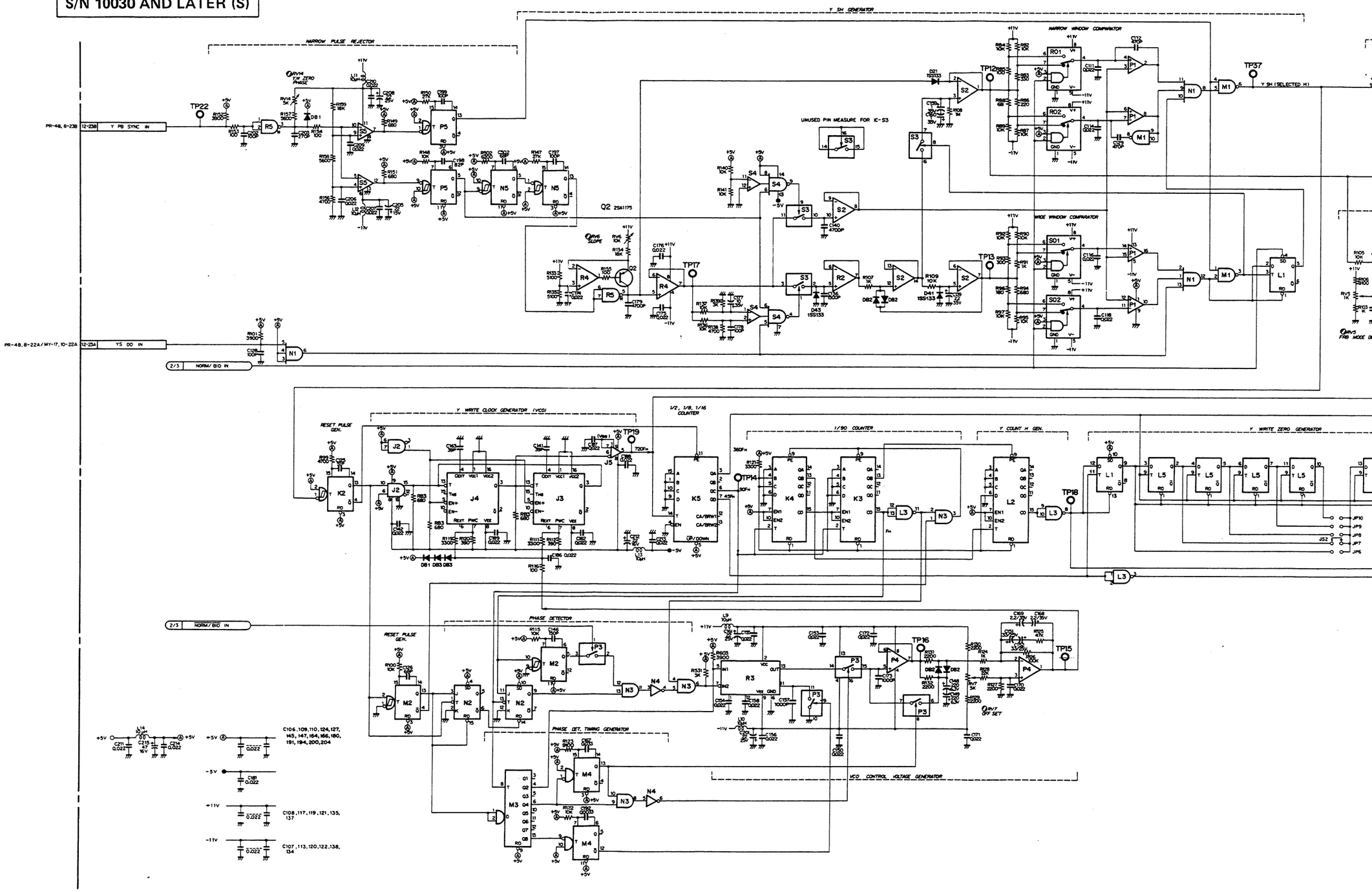


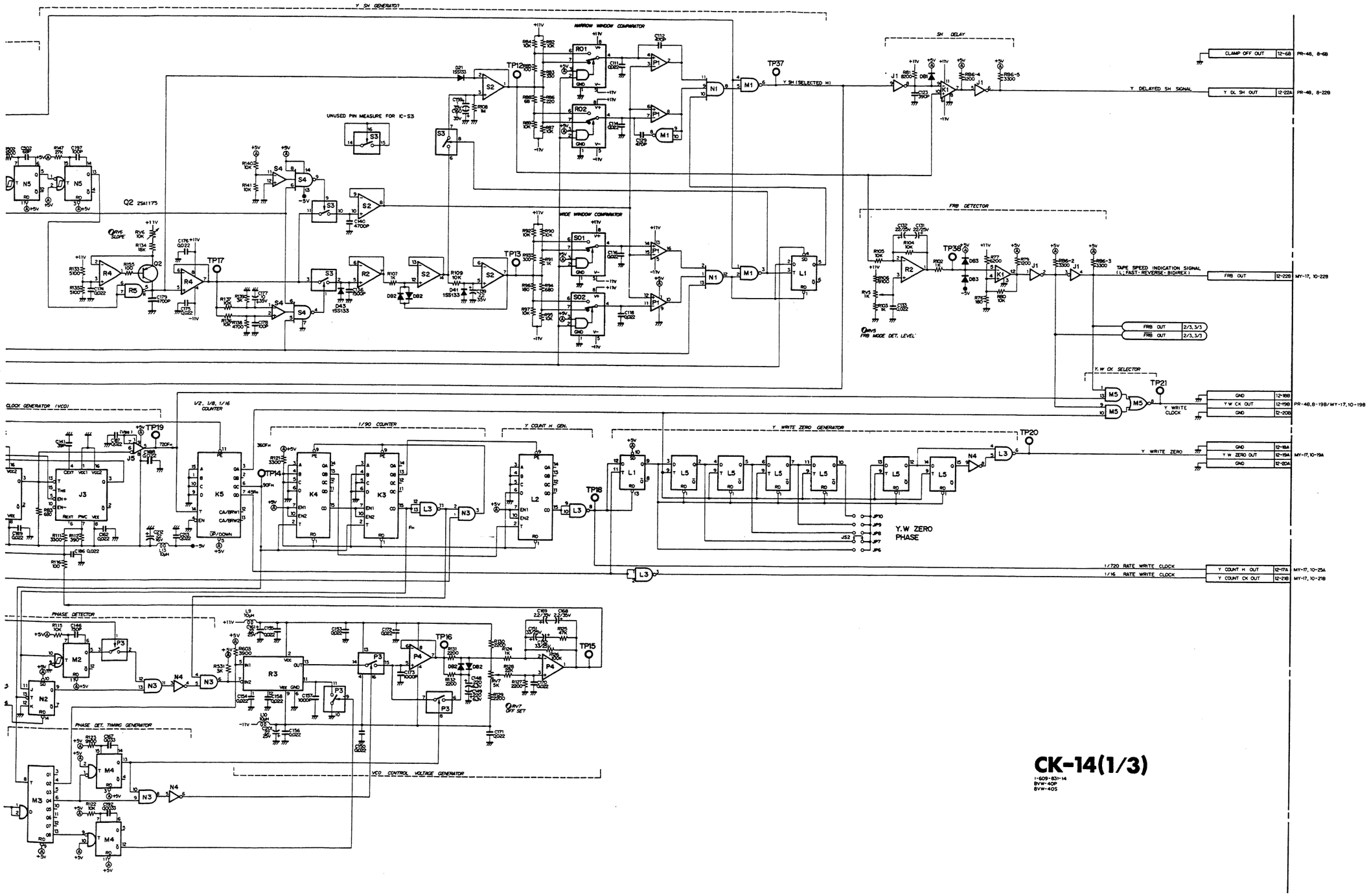


D8	A - 2
D9	A - 2
D10	A - 2
D20	G - 5
D21	R - 3
D23	X - 1
D24	V - 2
D25	X - 2
D26	Y - 2
D27	Y - 3
D28	Y - 3
D29	Y - 4
D30	W - 4
D31	G - 3
D40	S - 2
D42	H - 2
D43	R - 2
D44	G - 2
D50	V - 3
IC1	T - 3
IC2	T - 4
IC3	T - 2
Q1	G - 4
Q2	R - 4
Q3	X - 2
Q4	Y - 2
Q5	Y - 2
Q6	Y - 2
Q7	Y - 3
Q8	Y - 4
RV1	E - 4
RV2	G - 4
RV3	H - 4
RV5	P - 2
RV6	R - 4
RV7	V - 4
RV8	V - 3
RV9	X - 1
RV10	X - 2
RV11	Y - 1
RV12	W - 4
RV13	Z - 4
RV14	T - 5
RV20	V - 3
S1	Y - 5
S2	T - 5
S3	I - 1
TP1	A - 1
TP2	G - 3
TP3	H - 2
TP4	B - 3
TP5	C - 3
TP6	F - 3
TP7	C - 3
TP8	C - 4
TP9	E - 3
TP10	F - 5
TP11	F - 5
TP12	R - 2
TP13	S - 2
TP14	K - 3
TP15	L - 3
TP16	P - 3
TP17	S - 3
TP18	H - 4
TP19	K - 4
TP20	K - 5
TP21	M - 5
TP22	P - 5
TP23	S - 1
TP24	J - 4
TP25	Y - 1
TP26	Y - 1
TP27	Y - 1
TP28	Z - 2
TP29	X - 3
TP30	U - 4
TP31	V - 4
TP32	Y - 4
TP33	T - 5
TP34	T - 5
TP35	U - 5
TP36	W - 1
TP37	M - 1
TP38	N - 2
TP39	I - 3
TP40	D - 5
TP41	T - 4
TP42	W - 3
TP43	W - 5
TPE1	F - 1
TPE2	B - 5
TPE3	N - 2
TPE4	R - 5
TPE5	X - 5
TPE6	Y - 4

CK-14 (1/3) (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10030 AND LATER (S)





CK-14(1/3)

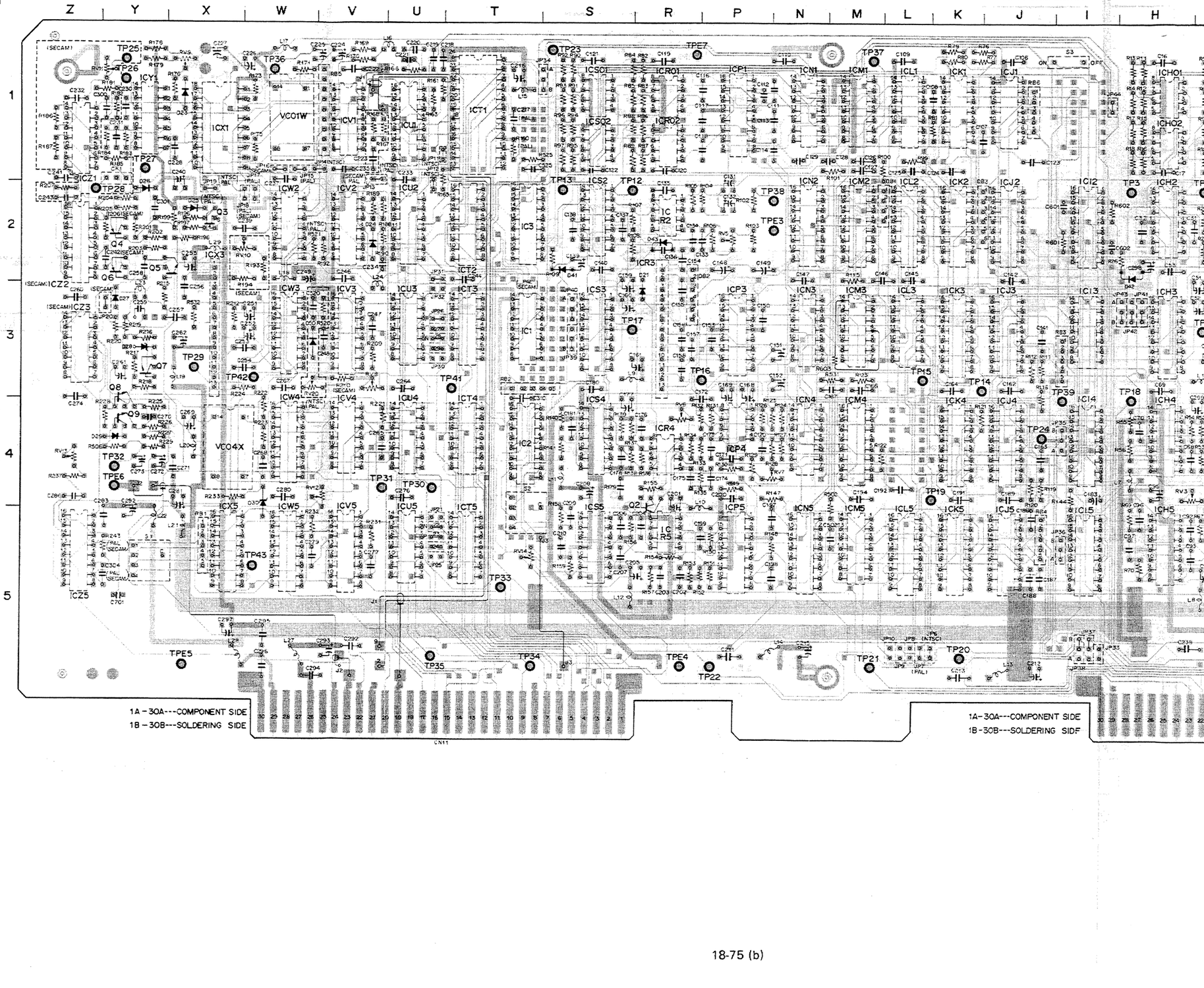
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BVW-40P
BVW-40S

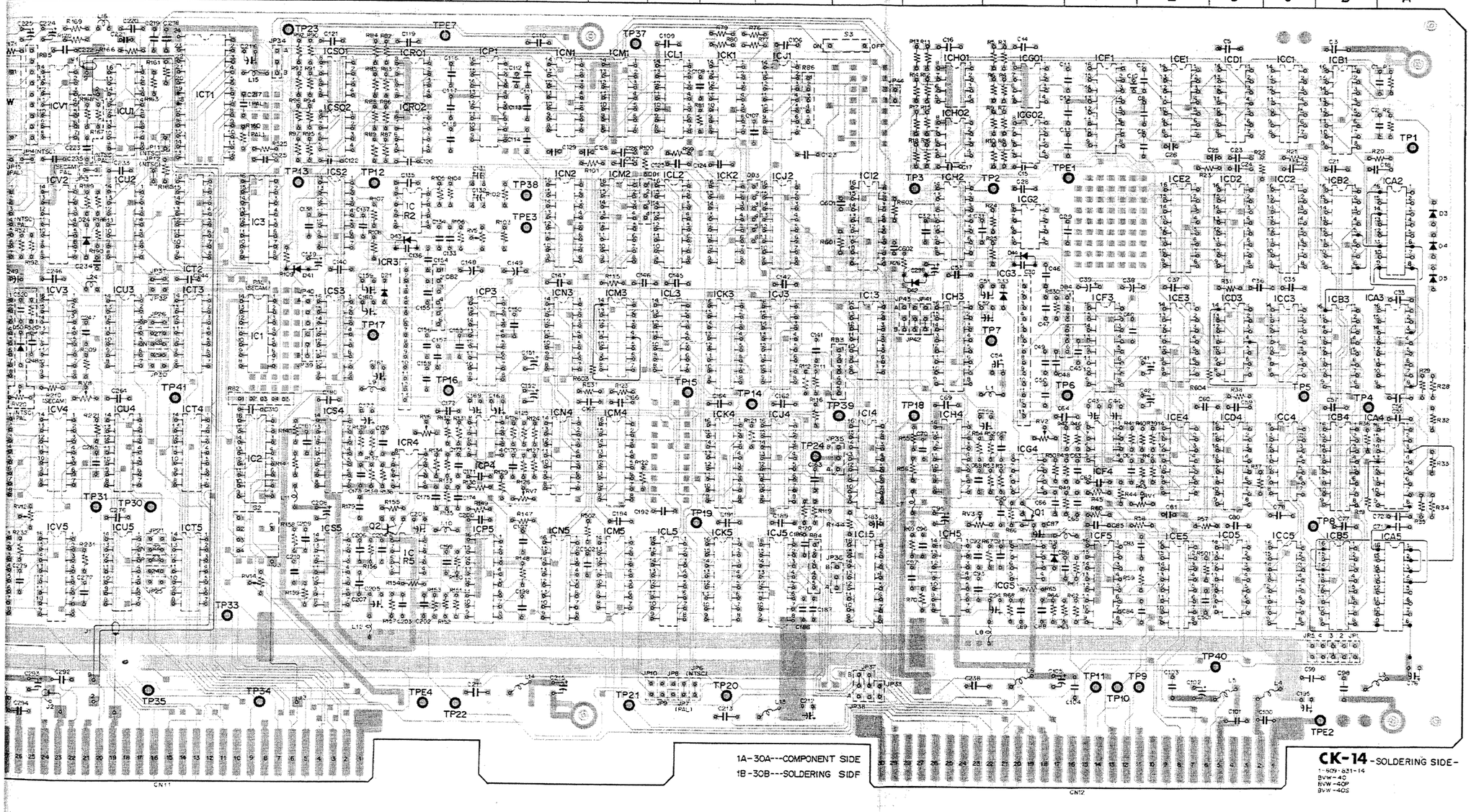
CK-14 CK-14

CK-14 (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10030 AND LATER (S)

Ref. No.	Type	Pin No. +11V	−5V	GND	+5V	+11V
IC 1	SN74LS74AN			7	14	
IC 2						
IC 3	SN74LS123N			8	16	
IC A2	HD10124		8	16	9	
IC A3	MC10198L		8	1, 16		
IC A4	MC10198L		8	1, 16		
IC A5	HD10125		8	16	9	
IC B1	SN74LS123N			8	16	
IC B2	SN74LS221N			8	16	
IC B3	SN74LS163AN			8	16	
IC B4	SN74S163N			8	16	
IC B5	SN74191N			8	16	
IC C1	SN74LS74AN			7	14	
IC C2	SN74LS163AN			8	16	
IC C3	SN7400N			7	14	
IC C4	SN74LS74AN			7	14	
IC C5	SN74LS174N			8	16	
IC D1	SN74LS00N			7	14	
IC D2	SN74LS221N			8	16	
IC D3	SN74LS164N			7	14	
IC D4	SN74LS123N			8	16	
IC D5	SN74S51N			7	14	
IC E1	SN74LS11N			7	14	
IC E2	SN74LS112AN			8	16	
IC E3	SN74LS08N			7	14	
IC E4	SN74LS04N			7	14	
IC E5	SN74LS221N			8	16	
IC F1	HA1 - 4905 - 5	5		9	1	13
IC F3	HI1 - 201 - 5	4		5		13
IC F4	μPC4557C	4				8
IC F5	SN74LS221N			8	16	
IC G01	TL601CP	5		1		8
IC G02	TL601CP	5		1		8
IC G2	TL082CP	4				8
IC G3	BX381	9		6		2
IC G4	NJM4560D	4				8
IC G5	SN75452BP			4	8	
IC H01	TL601CP	5		1		8
IC H02	TL601CP	5		1		8
IC H2	TL084CN	11				4
IC H3	HI1 - 201 - 5	4		5		13
IC H4	SN75207BN		13	7	14	
IC H5	μPC319C	6		2, 8		11
IC J1	SN7406N			7	14	
IC J2	HD10124		8	16	9	
IC J3	MC10198L		8	1, 16		
IC J4	MC10198L		8	1, 16		
IC J5	HD10125		8	16	9	
IC K1	μPC319C	6		2, 8		11
IC K2	SN74LS22AN			8	16	
IC K3	SN74LS163AN			8	16	
IC K4	SN74S163N			8	16	
IC K5	SN74191N			8	16	
IC L1	SN74LS74AN		7	14		
IC L2	SN74LS163AN			8	16	
IC L3	SN7400N			7	14	
IC L4	SN74LS74AN			7	14	
IC L5	SN74LS174N			8	16	
IC M1	SN74LS00N			7	14	
IC M2	SN74LS221N			8	16	
IC M3	SN74LS164N			7	14	
IC M4	SN74LS123N			8	16	
IC M5	SN74S51N			7	14	
IC N1	SN74LS11N			7	14	
IC N2	SN74LS112AN			8	16	
IC N3	SN74LS08N			7	14	
IC N4	SN74LS04N			7	14	
IC N5	SN74LS221N			8	16	
IC P1	HA1 - 4905 - 5	5		9	1	13
IC P3	HI1 - 201 - 5	4		5		13
IC P4	μPC4557C	4				8
IC P5	SN74LS221N			8	16	
IC R01	TL601CP	5		1		8
IC R02	TL601CP	5		1		8
IC R2	TL082CP	4				8
IC R3	BX381	9		6		2
IC R4	NJM4560D	4				8
IC R5	SN75452BP			4	8	
IC S01	TL601CP	5		1		8
IC S02	TL601CP	5		1		8
IC S2	TL084CN	11				4
IC S3	HI1 - 201 - 5	4		5		13
IC S4	SN75207BN		13	7	14	
IC S5	μPC319C	6		3, 8		11
IC T1	CX773A			12	24	
IC T2	SN74365AN			8	16	
IC T3	SN74LS164N			7	14	
IC T4	SN74LS164N			7	14	
IC T5	SN74LS164N			7	14	
IC U1	HD10125		8	16	9	
IC U2	SN7404N			7	14	
IC U3	SN74LS164N			7	14	
IC U4	SN74LS00N			7	14	
IC U5	SN74S51N			7	14	
IC V1	SN74LS00N			7	14	
IC V2	SN75207BN		13	7	14	
IC V3	SN74LS221N			8	16	
IC V4	SN7404N			7	14	
IC V5	SN74LS221N			8	16	
IC W2	SN7406N			7	14	
IC W3	SN74266N			8	16	
IC W4	SN74LS163AN			8	16	
IC W5	SN74LS163AN			8	16	
IC X1	CX7903				2	
IC X3	BX381	9		6		2
IC X5	SN74S163N			8	16	
IC Y1	μPC319C	6		3, 8		11
IC Z1	SN75207BN		13	7	14	
IC Z2	SN74LS221N			8	16	
IC Z3	SN74LS74AN		7	14		
IC Z5	SN74LS221N			8	16	

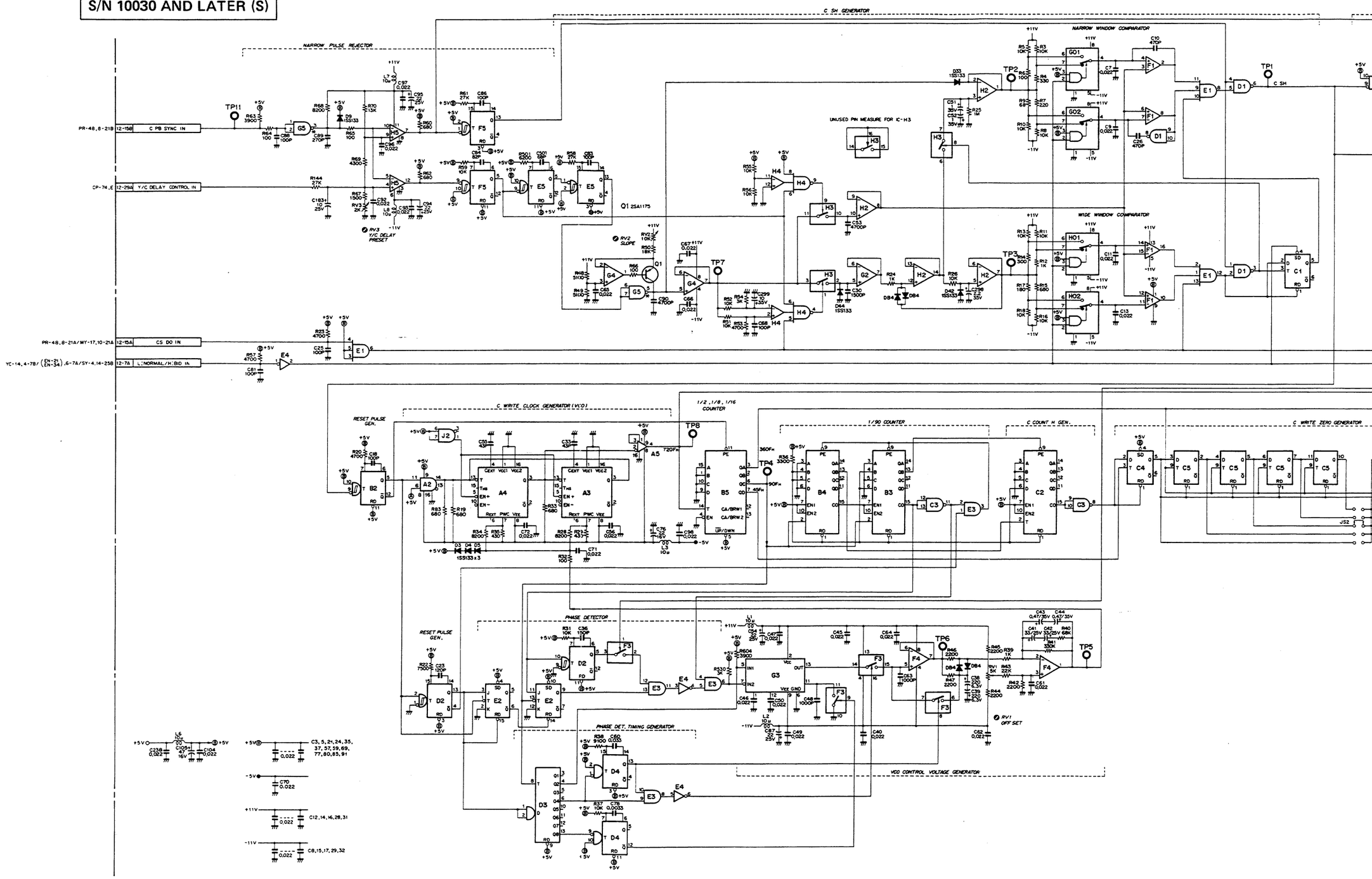


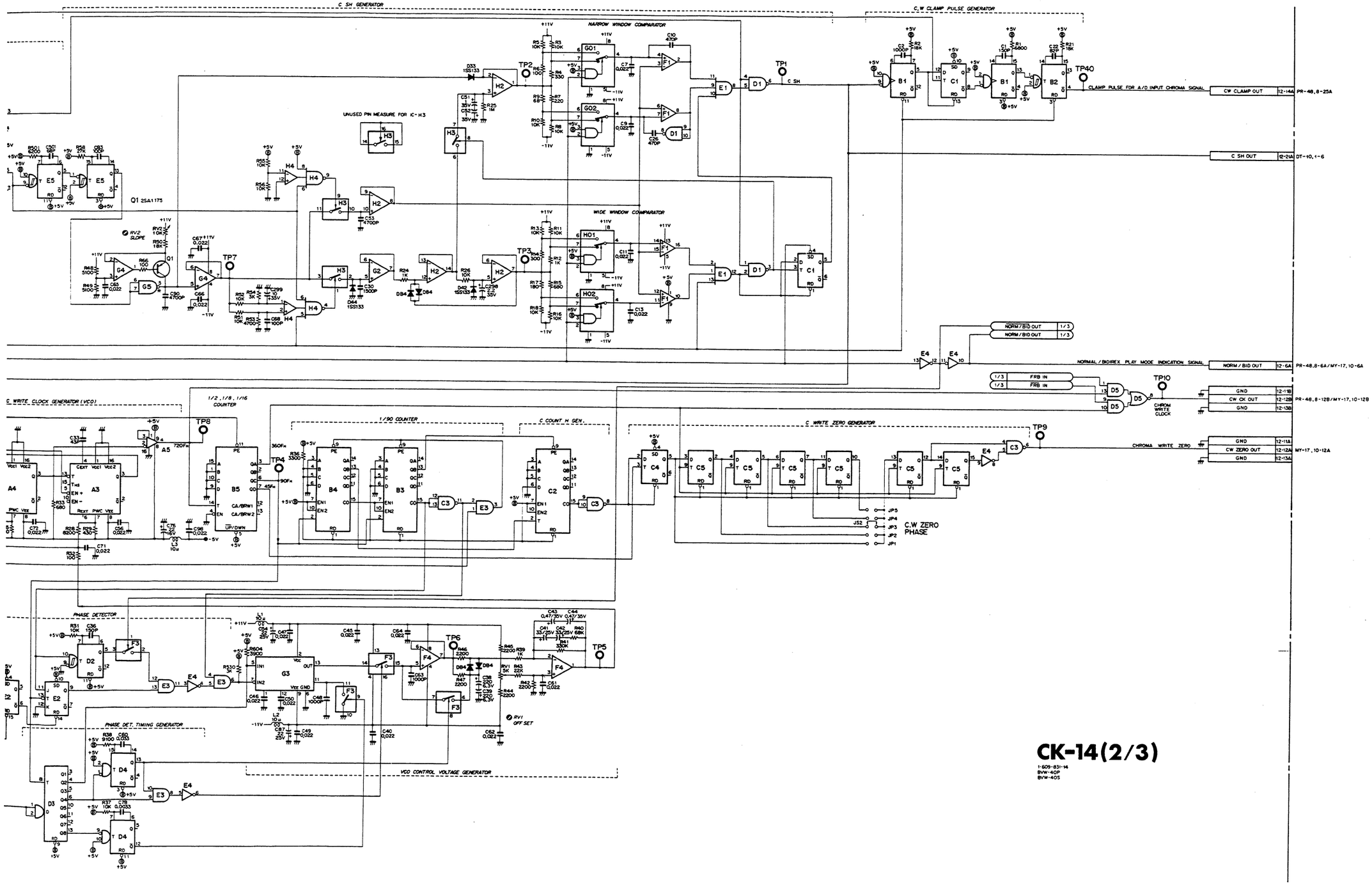


D3	A - 2
D4	A - 2
D5	A - 2
D9	G - 5
D21	R - 3
D23	X - 1
D24	X - 2
D25	X - 2
D26	Y - 2
D27	Y - 3
D28	Y - 3
D29	Y - 4
D30	W - 4
D33	G - 3
D41	S - 2
D42	H - 2
D43	E - 2
D44	G - 2
D50	V - 3
IC1	T - 3
IC2	T - 4
IC3	T - 2
Q1	G - 4
Q2	E - 4
Q3	X - 2
Q4	Y - 2
Q5	Y - 2
Q6	Y - 2
Q7	Y - 3
Q8	Y - 4
RV1	E - 4
RV2	G - 4
RV3	H - 4
RV5	P - 2
RV6	R - 4
RV7	N - 4
RV8	V - 3
RV9	X - 1
RV10	X - 2
RV11	Y - 1
RV12	W - 4
RV13	Z - 5
RV14	U - 5
RV20	V - 3
S1	Y - 5
S2	T - 5
S3	I - 1
TP1	A - 1
TP2	G - 2
TP3	H - 2
TP4	B - 5
TP5	C - 5
TP6	F - 3
TP7	G - 3
TP8	C - 4
TP9	E - 5
TP10	F - 5
TP11	F - 5
TP12	R - 2
TP13	S - 2
TP14	K - 3
TP15	L - 3
TP16	P - 3
TP17	S - 3
TP18	H - 1
TP19	K - 4
TP20	K - 5
TP21	M - 5
TP22	P - 5
TP23	S - 1
TP24	J - 4
TP25	Y - 1
TP26	Y - 1
TP27	Y - 1
TP28	Z - 2
TP29	X - 3
TP30	U - 4
TP31	V - 4
TP32	Y - 4
TP33	T - 5
TP34	T - 5
TP35	U - 5
TP36	W - 1
TP37	M - 1
TP38	N - 2
TP39	I - 3
TP40	D - 5
TP41	T - 4
TP42	W - 3
TP43	W - 5
TPE1	F - 1
TPE2	B - 5
TPE3	N - 2
TPE4	R - 5
TPE5	X - 5
TPE6	Y - 4

CK-14 (2/3) (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10030 AND LATER (S)





CK-14(2/3)

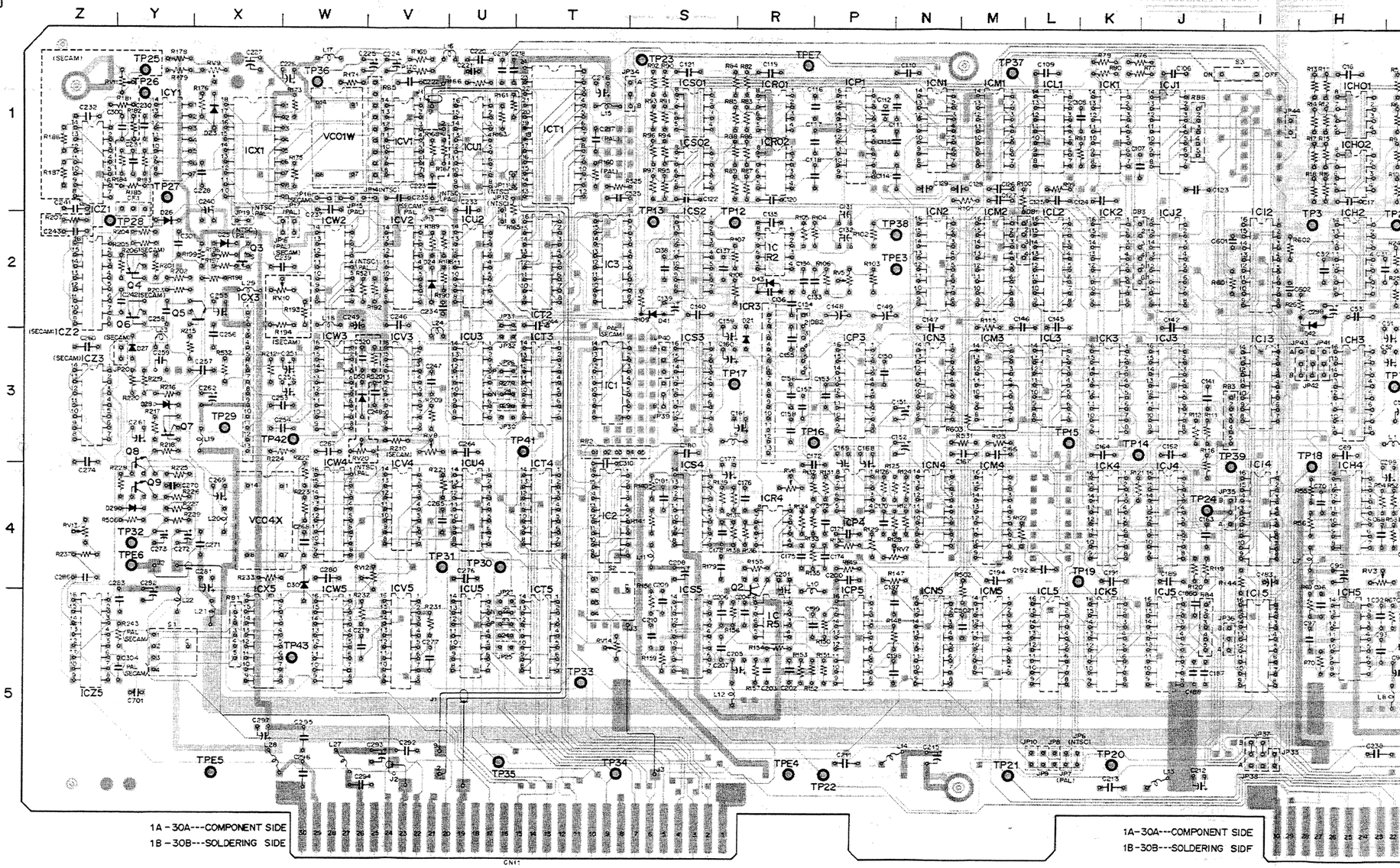
1-609-831-14
BVW-40P
BVW-40S

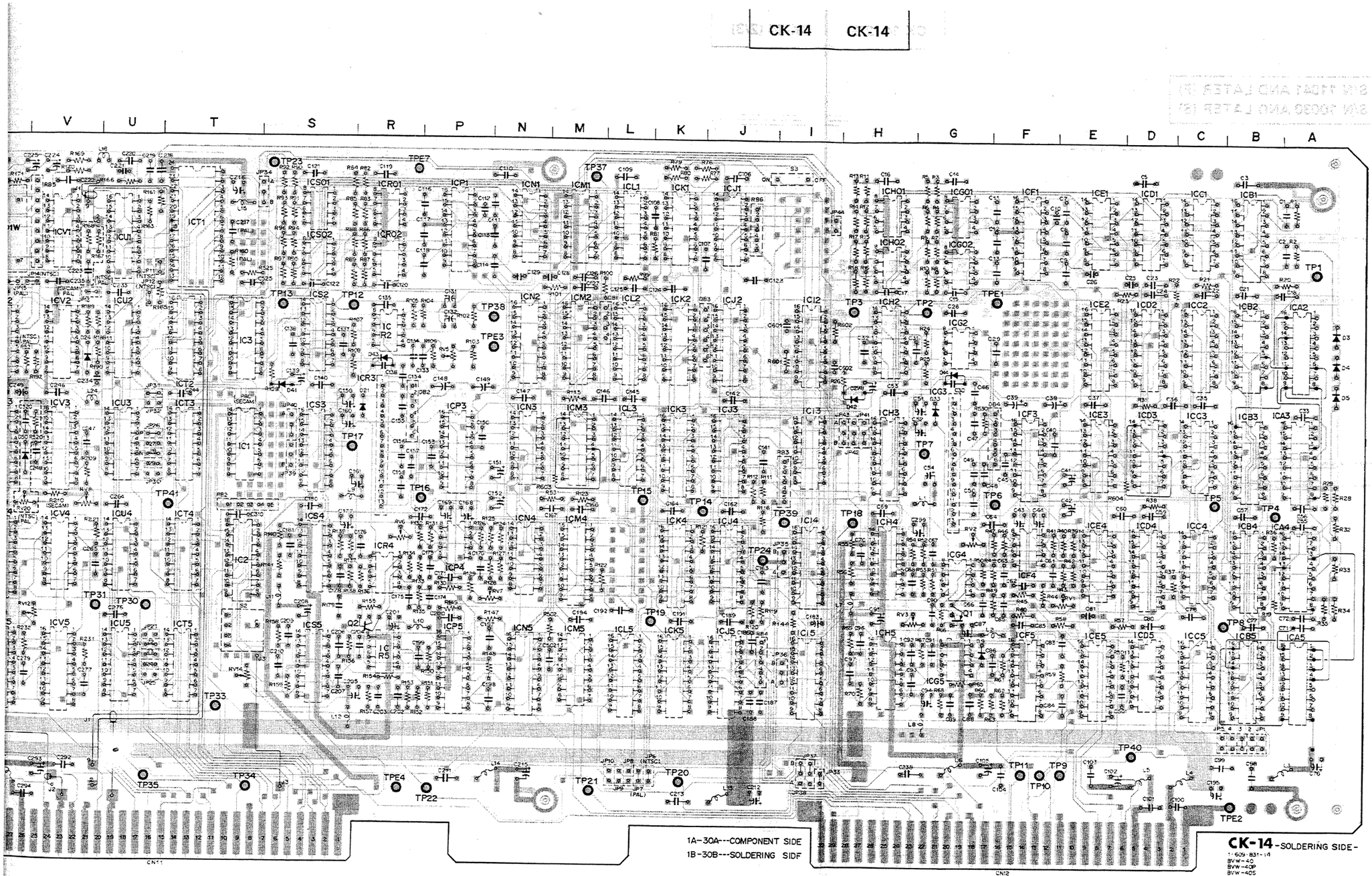
CK-14 CK-14

CK-14 (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10030 AND LATER (S)

Ref. No.	Type	Pin No. −11V	−8V	GND	+5V	+11V
IC 1	SN74LS74AN			7	14	
IC 2						
IC 3	SN74LS123N			8	16	
IC A2	HD10124		8	16	9	
IC A3	MC10198L		8	1, 16		
IC A4	MC10196L		8	1, 16		
IC A5	HD10125		8	16	9	
IC B1	SN74LS425N			8	16	
IC B2	SN74LS221N			8	16	
IC B3	SN74LS163AN			8	16	
IC B4	SN74S163N			8	16	
IC B5	SN74191N			8	16	
IC C1	SN74LS74AN			7	14	
IC C2	SN74LS163AN			8	16	
IC C3	SN7400N			7	14	
IC C4	SN74LS74AN			7	14	
IC C5	SN74LS174N			8	16	
IC D1	SN74LS00N			7	14	
IC D2	SN74LS221N			8	16	
IC D3	SN74LS164N			7	14	
IC D4	SN74LS123N			8	16	
IC D5	SN74S51N			7	14	
IC E1	SN74LS11N			7	14	
IC E2	SN74LS112AN			8	16	
IC E3	SN74LS08N			7	14	
IC E4	SN74LS04N			7	14	
IC E5	SN74LS221N			8	16	
IC F1	HA1-4905-5	5		9	1	13
IC F3	HI-201-5	4		5		13
IC F4	μPC4557C	4				8
IC F5	SN74LS221N			8	16	
IC G01	TL601CP	5		1		8
IC G02	TL601CP	5		1		8
IC G2	TL082CP	4				8
IC G3	BX381	9		6		2
IC G4	NJM4560D	4				8
IC G5	SN75452BP			4	8	
IC H01	TL601CP	5		1		8
IC H02	TL601CP	5		1		8
IC H2	TL084CN	11				4
IC H3	HI-201-5	4		5		13
IC H4	SN75207BN		13	7	14	
IC H5	μPC319C	6		3, 8		11
IC J1	SN7406N			7	14	
IC J2	HD10124		8	16	9	
IC J3	MC10198L		8	1, 16		
IC J4	MC10198L		8	1, 16		
IC J5	HD10125		8	16	9	
IC K1	μPC319C	6		3, 8		11
IC K2	SN74LS322AN			8	16	
IC K3	SN74LS163AN			8	16	
IC K4	SN74S163N			8	16	
IC K5	SN74191N			8	16	
IC L1	SN74LS74AN		7	14		
IC L2	SN74LS163AN			8	16	
IC L3	SN7400N			7	14	
IC L4	SN74LS74AN			7	14	
IC L5	SN74LS174N			8	16	
IC M1	SN74LS00N			7	14	
IC M2	SN74LS221N			8	16	
IC M3	SN74LS164N			7	14	
IC M4	SN74LS123N			8	16	
IC M5	SN74S51N			7	14	
IC N1	SN74LS11N			7	14	
IC N2	SN74LS112AN			8	16	
IC N3	SN74LS08N			7	14	
IC N4	SN74LS04N			7	14	
IC N5	SN74LS221N			8	16	
IC P1	HA1-4905-5	5		9	1	13
IC P3	HI-201-5	4		5		13
IC P4	μPC4557C	4				8
IC P5	SN74LS221N			8	16	
IC R01	TL601CP	5		1		8
IC R02	TL601CP	5		1		8
IC R2	TL082CP	4				8
IC R3	BX381	9		6		2
IC R4	NJM4560D	4				8
IC R5	SN75452BP			4	8	
IC S01	TL601CP	5		1		8
IC S02	TL601CP	5		1		8
IC S2	TL084CN	11				4
IC S3	HI-201-5	4		5		13
IC S4	SN75207BN		13	7	14	
IC S5	μPC319C	6		3, 8		11
IC T1	CX773A			12	24	
IC T2	SN74365AN			8	16	
IC T3	SN74LS164N			7	14	
IC T4	SN74LS164N			7	14	
IC T5	SN74LS164N			7	14	
IC U1	HD10125		8	16	9	
IC U2	SN7404N			7	14	
IC U3	SN74LS164N			7	14	
IC U4	SN74LS00N			7	14	
IC U5	SN74S51N			7	14	
IC V1	SN74LS00N			7	14	
IC V2	SN75207BN		13	7	14	
IC V3	SN74LS221N			8	16	
IC V4	SN7404N			7	14	
IC V5	SN74LS221N			8	16	
IC W2	SN7406N			7	14	
IC W3	SN74265N			8	16	
IC W4	SN74LS163AN			8	16	
IC W5	SN74LS163AN			8	16	
IC X1	CX7905			7	2	
IC X3	BX381	9		6		2
IC X5	SN74S162N			8	16	
IC Y1	μPC319C	6		3, 8		11
IC Z1	SN75207BN		13	7	14	
IC Z2	SN74LS221N			8	16	
IC Z3	SN74LS74AN		7	14		
IC Z5	SN74LS221N			8	16	

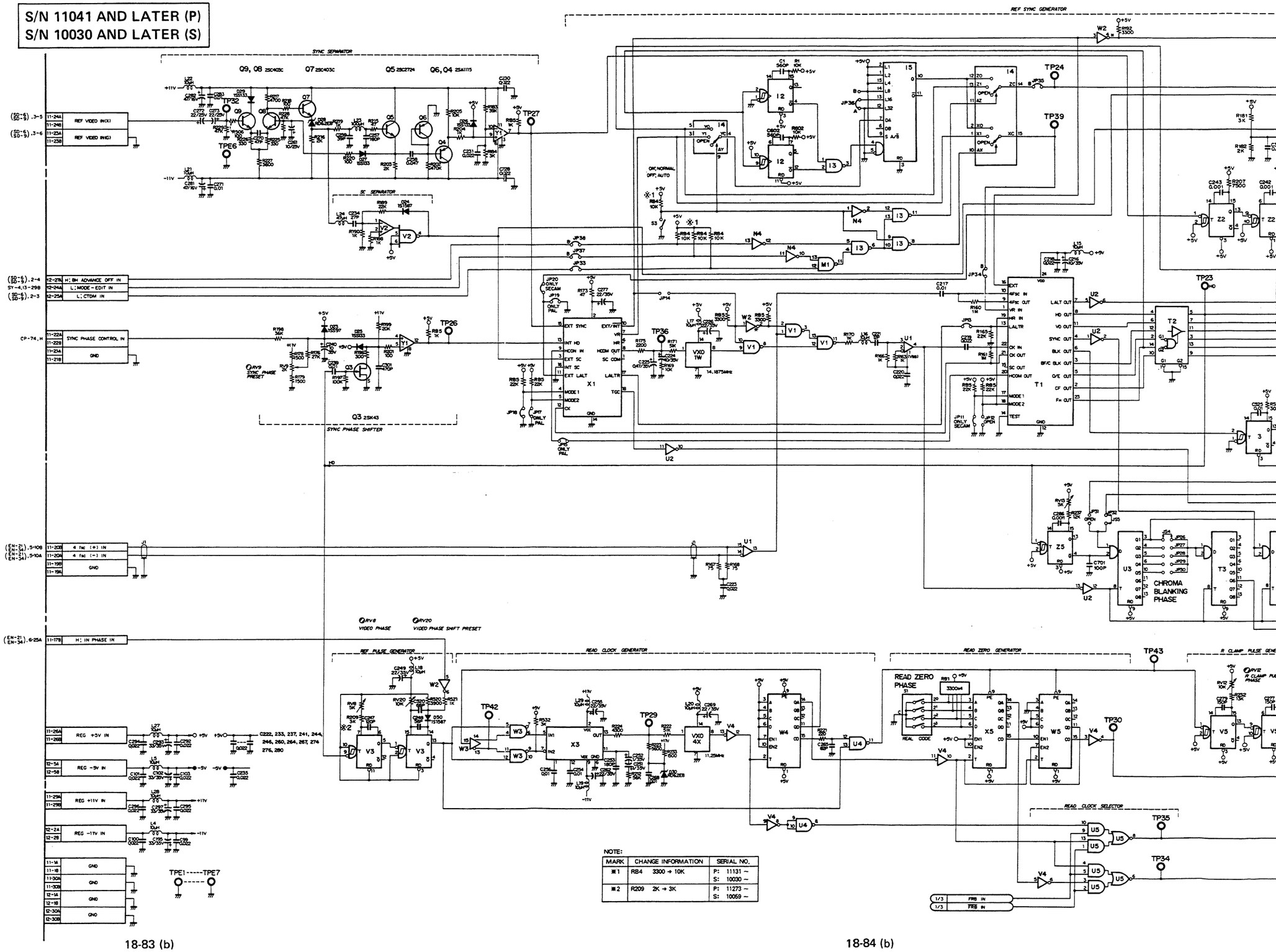




D3	A - 2
D4	A - 2
D5	A - 2
D9	G - 5
D21	R - 3
D23	X - 1
D24	V - 2
D25	X - 2
D26	Y - 2
D27	Y - 3
D28	Y - 3
D29	Y - 4
D30	W - 4
D33	G - 3
D41	S - 2
D42	H - 2
D43	G - 2
D50	V - 3
IC1	T - 3
IC2	T - 4
IC3	T - 2
Q1	G - 4
Q2	R - 4
Q3	X - 2
Q4	Y - 2
Q5	Y - 2
Q6	Y - 2
Q7	Y - 3
Q8	Y - 3
Q9	Y - 4
RV1	E - 4
RV2	G - 4
RV3	H - 4
RV5	P - 2
RV6	R - 4
RV7	N - 4
RV8	V - 3
RV9	X - 1
RV10	X - 2
RV11	Y - 1
RV12	W - 4
RV13	Z - 4
RV14	T - 5
RV20	V - 3
S1	Y - 5
S2	T - 5
S3	I - 1
TP1	A - 1
TP2	G - 2
TP3	H - 2
TP4	B - 3
TP5	C - 3
TP6	F - 3
TP7	G - 3
TP8	C - 4
TP9	E - 5
TP10	F - 5
TP11	F - 5
TP12	R - 2
TP13	S - 2
TP14	K - 3
TP15	L - 3
TP16	P - 3
TP17	S - 3
TP18	H - 4
TP19	K - 4
TP20	K - 5
TP21	M - 5
TP22	P - 5
TP23	S - 1
TP24	J - 4
TP25	Y - 1
TP26	Y - 1
TP27	Y - 1
TP28	Z - 2
TP29	X - 3
TP30	U - 4
TP31	V - 4
TP32	Y - 4
TP33	T - 5
TP34	T - 5
TP35	U - 5
TP36	W - 1
TP37	M - 1
TP38	N - 2
TP39	J - 3
TP40	D - 5
TP41	T - 4
TP42	W - 3
TP43	W - 5
TPE1	F - 1
TPE2	B - 5
TPE3	N - 2
TPE4	R - 5
TPE5	X - 5
TPE6	Y - 4

CK-14 (3/3) (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10030 AND LATER (S)

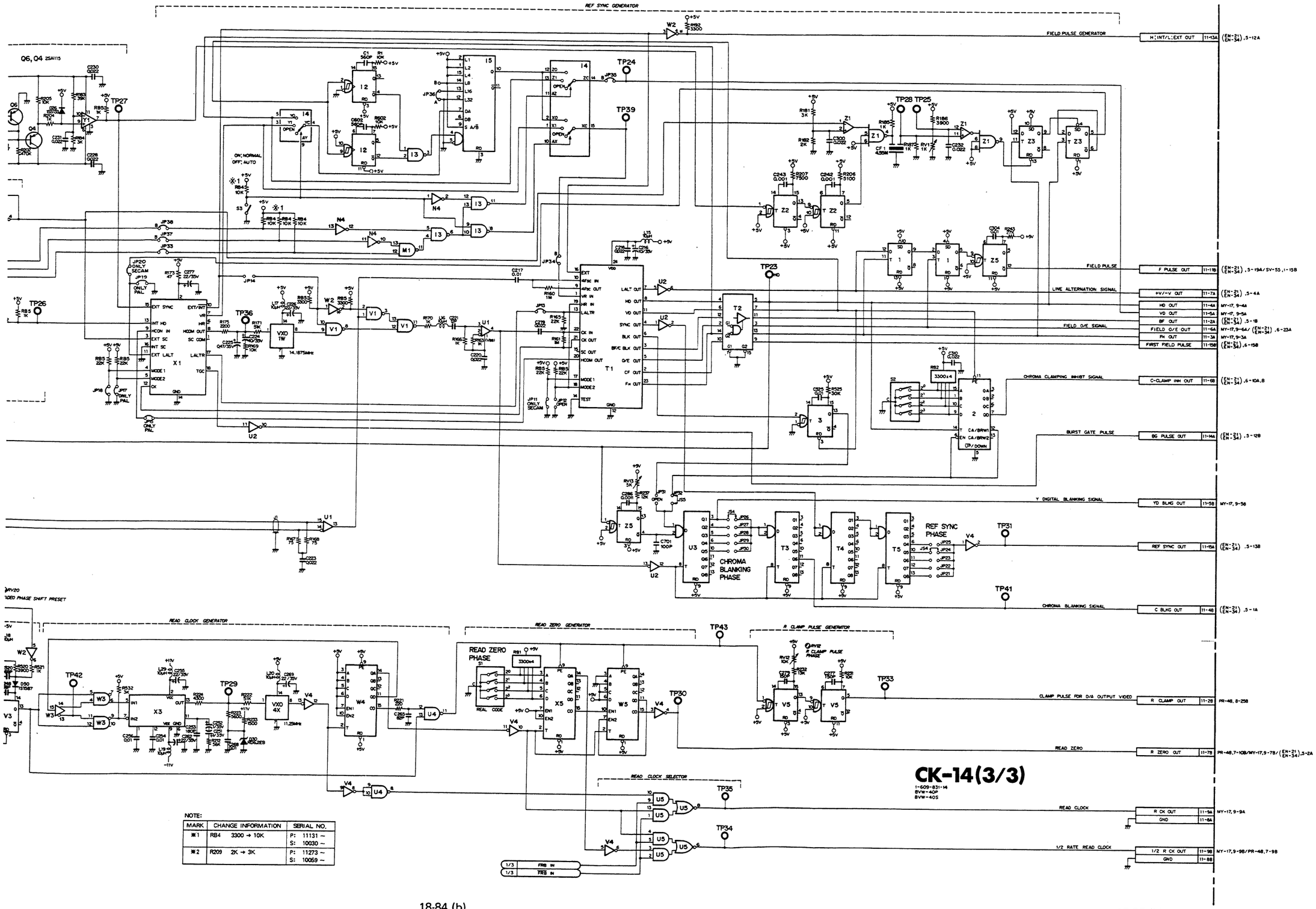


NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	RB4 3300 → 10K	P: 11131 ~ S: 10030 ~
※2	R209 2K → 3K	P: 11273 ~ S: 10059 ~

18-83 (b)

18-84 (b)



NOTE:

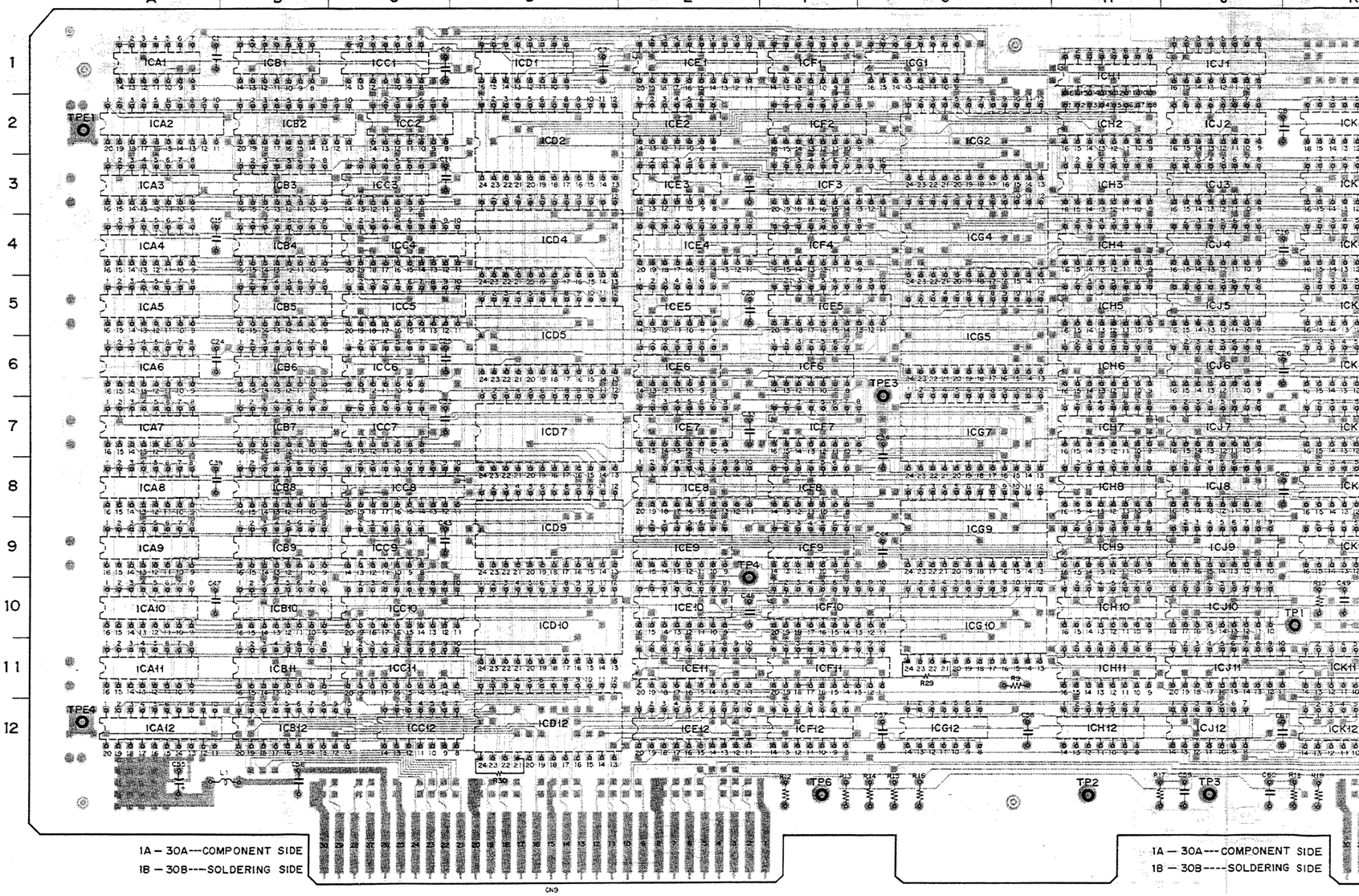
MARK	CHANGE INFORMATION	SERIAL NO.
※1	RB4 3300 → 10K	P: 11131 ~ S: 10030 ~
※2	R209 2K → 3K	P: 11273 ~ S: 10059 ~

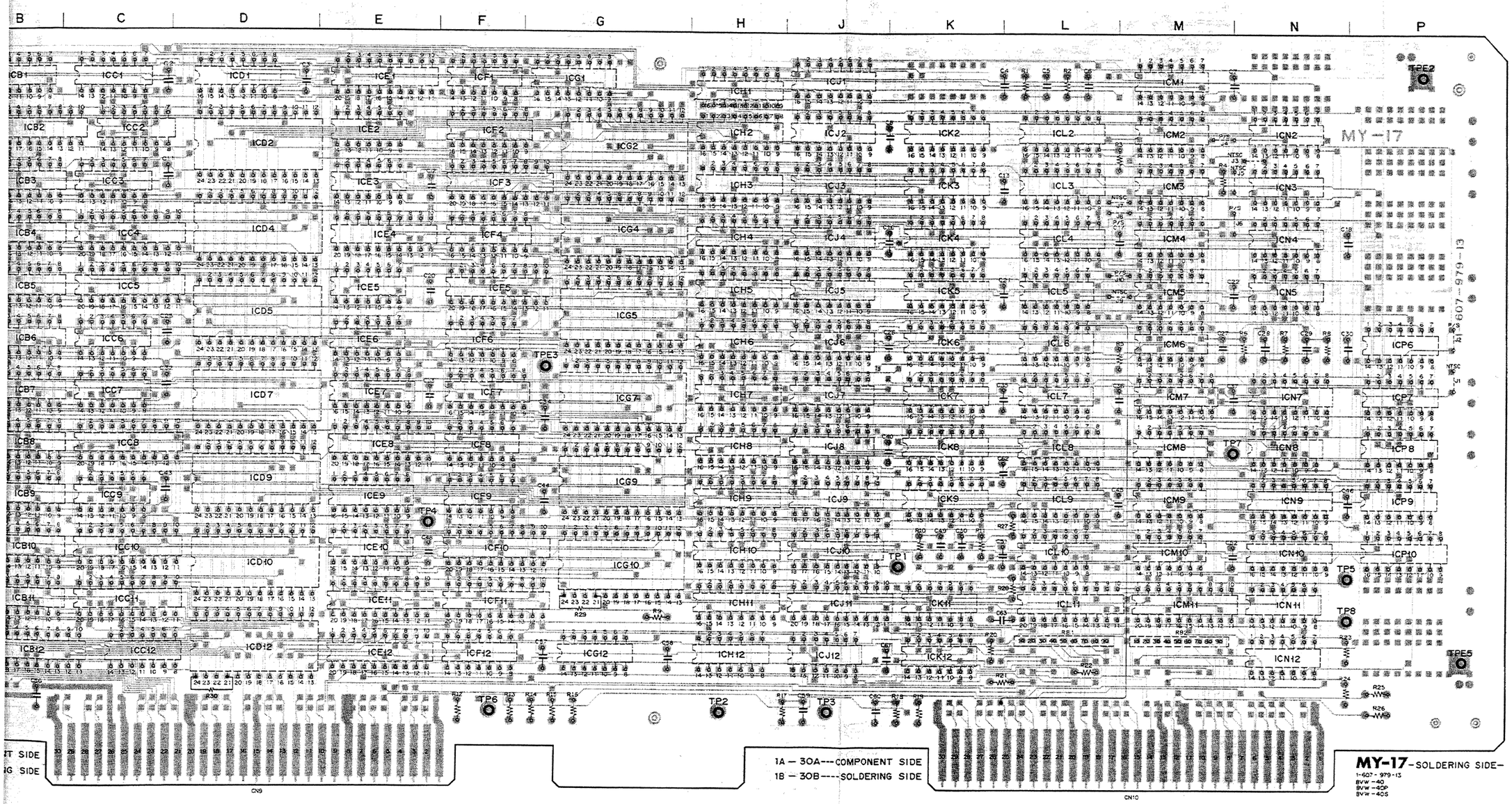
MY-17 MY-17

MY-17 (VIDEO TBC)

Ref. No.	Type	Pin No. GND	Pin No. +5V
IC A1	SN74LS164N	7	14
IC A2	SN74LS374N	10	20
IC A3	SN74LS166AN	8	16
IC A4	SN74LS166AN	8	16
IC A5	SN74LS166AN	8	16
IC A6	SN74LS166AN	8	16
IC A7	SN74LS166AN	8	16
IC A8	SN74LS166AN	8	16
IC A9	SN74LS166AN	8	16
IC A10	SN74LS166AN	8	16
IC A11	SN74LS166AN	8	16
IC A12	SN74LS374N	10	20
IC B1	SN74LS164N	7	14
IC B2	SN74LS374N	10	20
IC B3	SN74LS166AN	8	16
IC B4	SN74LS166AN	8	16
IC B5	SN74LS166AN	8	16
IC B6	SN74LS166AN	8	16
IC B7	SN74LS166AN	8	16
IC B8	SN74LS166AN	8	16
IC B9	SN74LS166AN	8	16
IC B10	SN74LS166AN	8	16
IC B11	SN74LS166AN	8	16
IC B12	SN74LS374N	10	20
IC C1	SN74LS164N	7	14
IC C2	SN74LS164N	7	14
IC C3	SN74LS164N	7	14
IC C4	SN74LS374N	10	20
IC C5	SN74LS374N	10	20
IC C6	SN74LS164N	7	14
IC C7	SN74LS164N	7	14
IC C8	SN74LS374N	10	20
IC C9	SN74LS164N	7	14
IC C10	SN74LS374N	10	20
IC C11	SN74LS374N	10	20
IC C12	SN74LS164N	7	14
IC D1	SN74LS166AN	8	16
IC D2	MSM5128-12RS	12	24
IC D4	MSM5128-12RS	12	24
IC D5	MSM5128-12RS	12	24
IC D7	MSM5128-12RS	12	24
IC D9	MSM5128-12RS	12	24
IC D10	MSM5128-12RS	12	24
IC D12	MSM5128-12RS	12	24
IC E1	SN74LS374N	10	20
IC E2	SN74LS164N	7	14
IC E3	SN74LS164N	7	14
IC E4	SN74LS374N	10	20
IC E5	SN74LS164N	7	14
IC E6	SN74LS164N	7	14
IC E7	SN74LS166AN	8	16
IC E8	SN74LS374N	10	20
IC E9	SN74LS166AN	8	16
IC E10	SN74LS166AN	8	16
IC E11	SN74LS374N	10	20
IC E12	SN74273N	10	20
IC F1	SN74LS164N	7	14
IC F2	SN74LS166AN	8	16
IC F3	SN74LS374N	10	20
IC F4	SN74LS166AN	8	16
IC F5	SN74LS374N	10	20
IC F6	SN74LS164N	7	14
IC F7	SN74LS166AN	8	16
IC F8	SN74LS164N	7	14
IC F9	SN74LS164N	7	14
IC F10	SN74LS374N	10	20
IC F11	SN74LS374N	10	20
IC F12	SN74LS04N	7	14
IC G1	SN74LS166AN	8	16
IC G2	MSM5128-12RS	12	24
IC G4	MSM5128-12RS	12	24
IC G5	MSM5128-12RS	12	24
IC G7	MSM5128-12RS	12	24
IC G9	MSM5128-12RS	12	24
IC G10	MSM5128-12RS	12	24
IC G12	SN74LS164N	7	14
IC H1	SN74LS161AN	8	16
IC H2	SN74LS157N	8	16
IC H3	SN74LS157N	8	16
IC H4	SN74LS157N	8	16
IC H5	SN74LS157N	8	16
IC H6	SN74LS161AN	8	16
IC H7	SN74LS157N	8	16
IC H8	SN74LS157N	8	16
IC H9	SN74LS163AN	8	16
IC H10	SN74LS163AN	8	16
IC H11	SN74LS163AN	8	16
IC H12	SN7404N	7	14

Ref. No.	Type	Pin No. GND	Pin No. +5V
IC J1	SN74LS161AN	8	16
IC J2	SN74LS161AN	8	16
IC J3	SN74LS175N	8	16
IC J4	SN74LS175N	8	16
IC J5	SN74LS163AN	8	16
IC J6	SN74LS161AN	8	16
IC J7	SN74LS157N	8	16
IC J8	SN74LS157N	8	16
IC J9	MBM2149L-55	9	18
IC J10	MBM2149L-55	9	18
IC J11	SN74LS374N	10	20
IC J12	SN74LS74AN	7	14
IC K2	SN74LS161AN	8	16
IC K3	SN74LS175N	8	16
IC K4	SN74LS163AN	8	16
IC K5	SN74LS85N	8	16
IC K6	SN74LS191N	8	16
IC K7	SN74LS161AN	8	16
IC K8	SN74LS161AN	8	16
IC K9	SN74LS123N	8	16
IC K11	SN74LS02N	7	14
IC K12	SN74LS04N	7	14
IC L2	SN74LS221N	8	16
IC L3	SN74LS161AN	8	16
IC L4	SN74LS151N	8	16
IC L5	SN74LS393N	7	14
IC L6	SN74LS00N	7	14
IC L7	SN74LS08N	7	14
IC L8	SN74LS191N	8	16
IC L9	SN74LS161AN	8	16
IC L10	SN74LS74AN	7	14
IC L11	SN74LS374N	10	20
IC M1	SN7408N	7	14
IC M2	SN74LS164N	7	14
IC M3	SN74LS74AN	7	14
IC M4	SN74LS30N	7	14
IC M5	SN74LS04N	7	14
IC M6	SN74LS74AN	7	14
IC M7	SN74LS221N	8	16
IC M8	SN74LS00N	7	14
IC M9	SN74LS04N	7	14
IC M10	SN7400N	7	14
IC M11	SN74LS374N	10	20
IC N2	SN74LS164N	7	14
IC N3	SN74LS74AN	7	14
IC N4	SN74LS74AN	7	14
IC N5	SN74LS04N	7	14
IC N7	SN74LS123N	8	16
IC N8	SN7404N	7	14
IC N9	SN74LS161AN	8	16
IC N10	SN74LS161AN	8	16
IC N11	SN74LS04N	7	14
IC N12	SN74LS04N	7	14
IC P5	SN74LS00N	7	14
IC P7	SN74LS164N	7	14
IC P8	SN7404N	7	14
IC P9	SN74LS00N	7	14
IC P10	SN74LS161AN	8	16

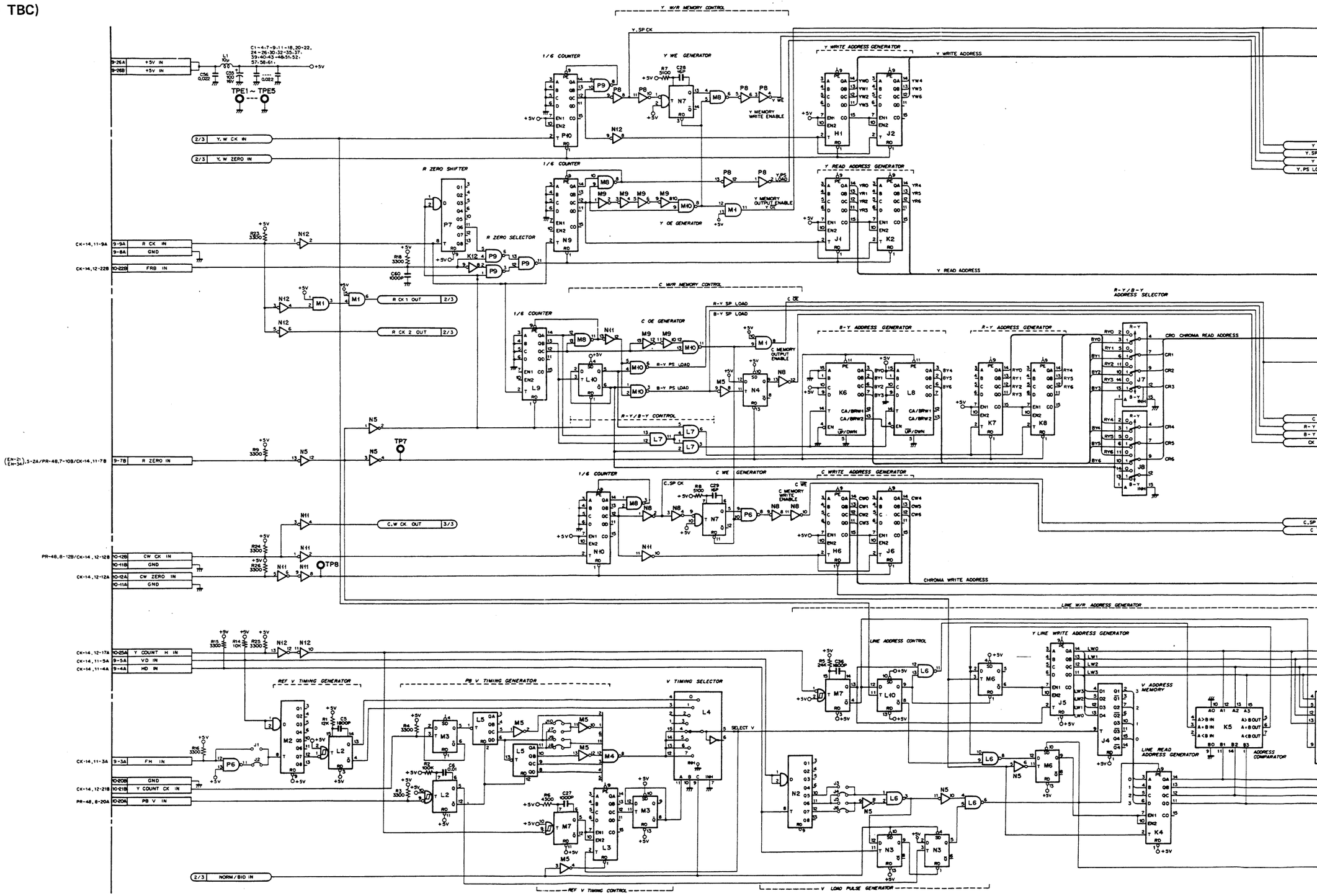




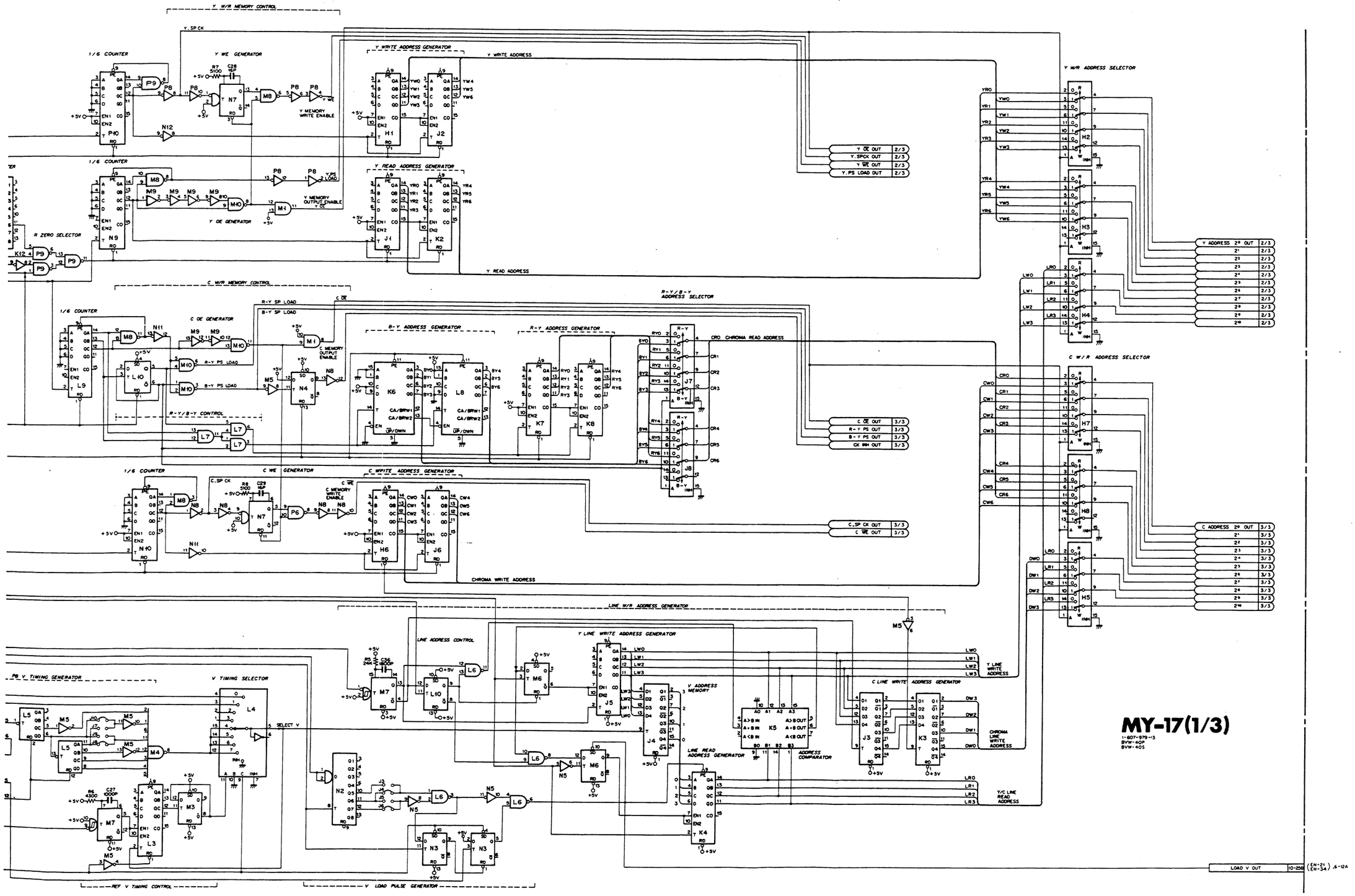
TP1 K - 10
TP2 H - 12
TP3 J - 12
TP4 E - 9
TP5 P - 11
TP6 F - 12
TP7 N - 8
TP8 P - 11

TPE1 A - 2
TPE2 P - 1
TPE3 G - 7
TPE4 A - 12
TPE5 P - 12

MY-17 (1/3) (VIDEO TBC)



MY-17 (1/3)
MY-17 (1/3)



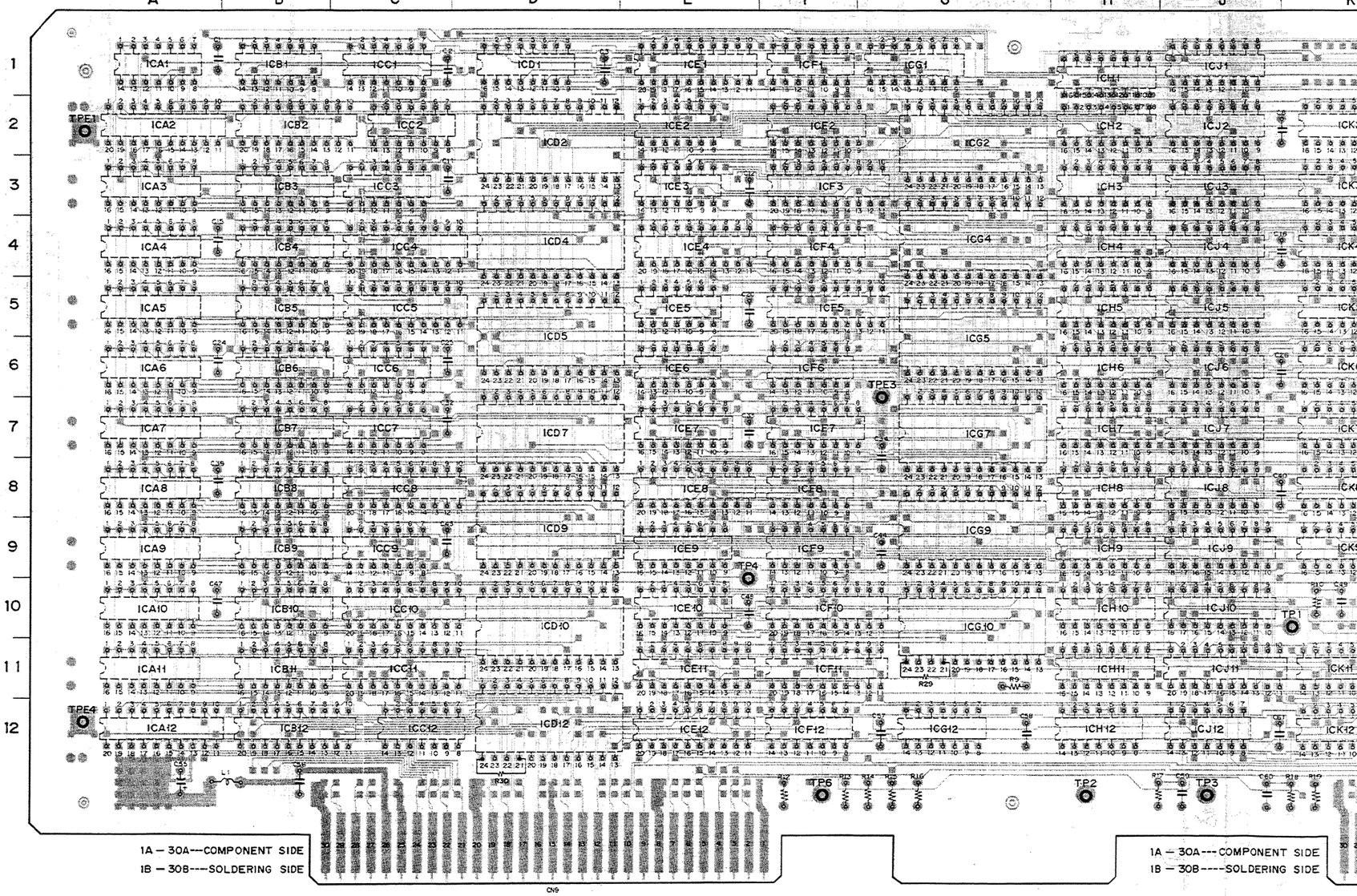
MY-17(1/3)

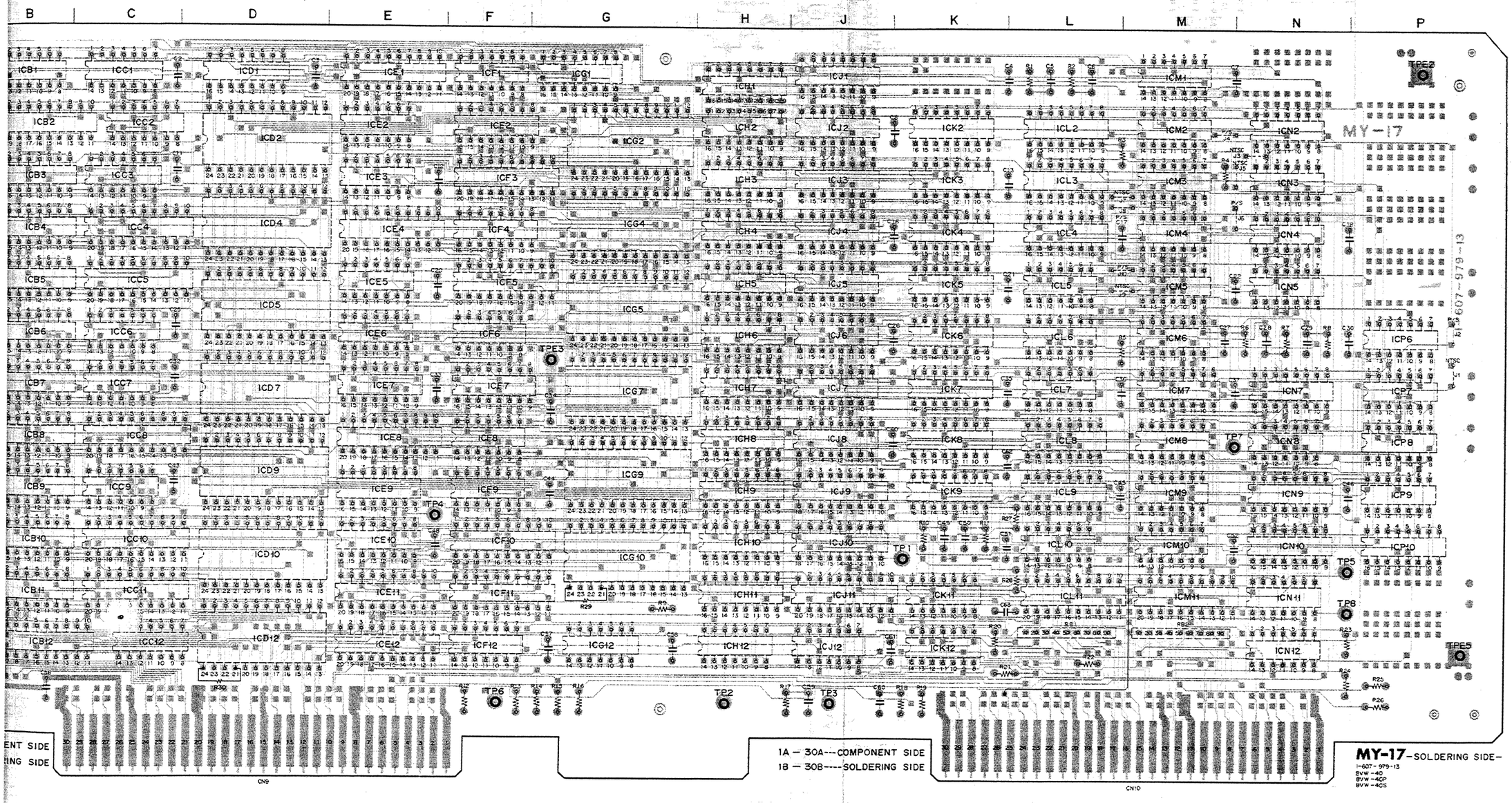
1-607-979-13
BVW-40P
BVW-40S

MY-17 (VIDEO TBC)

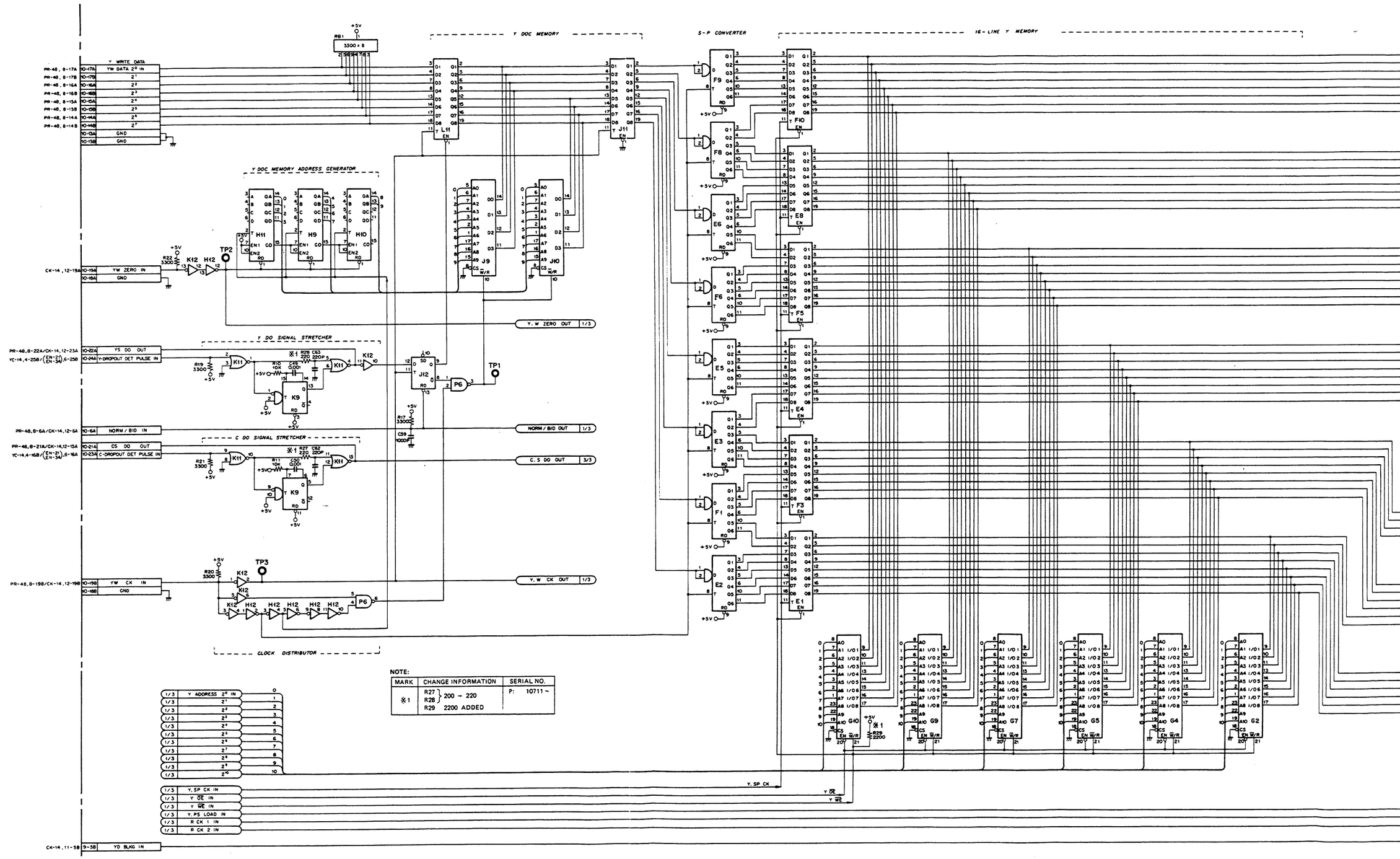
Ref. No.	Type	Pin No. GND	Pin No. +5V
IC A1	SN74LS164N	7	14
IC A2	SN74LS374N	10	20
IC A3	SN74LS166AN	8	16
IC A4	SN74LS166AN	8	16
IC A5	SN74LS166AN	8	16
IC A6	SN74LS166AN	8	16
IC A7	SN74LS166AN	8	16
IC A8	SN74LS166AN	8	16
IC A9	SN74LS166AN	8	16
IC A10	SN74LS166AN	8	16
IC A11	SN74LS166AN	8	16
IC A12	SN74LS374N	10	20
IC B1	SN74LS164N	7	14
IC B2	SN74LS374N	10	20
IC B3	SN74LS166AN	8	16
IC B4	SN74LS166AN	8	16
IC B5	SN74LS166AN	8	16
IC B6	SN74LS166AN	8	16
IC B7	SN74LS166AN	8	16
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IC B9	SN74LS166AN	8	16
IC B10	SN74LS166AN	8	16
IC B11	SN74LS166AN	8	16
IC B12	SN74LS374N	10	20
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IC C2	SN74LS164N	7	14
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IC C4	SN74LS374N	10	20
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IC C8	SN74LS374N	10	20
IC C9	SN74LS164N	7	14
IC C10	SN74LS374N	10	20
IC C11	SN74LS374N	10	20
IC C12	SN74LS164N	7	14
IC D1	SN74LS166AN	8	16
IC D2	MSM5128-12RS	12	24
IC D4	MSM5128-12RS	12	24
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IC D9	MSM5128-12RS	12	24
IC D10	MSM5128-12RS	12	24
IC D12	MSM5128-12RS	12	24
IC E1	SN74LS374N	10	20
IC E2	SN74LS164N	7	14
IC E3	SN74LS164N	7	14
IC E4	SN74LS374N	10	20
IC E5	SN74LS164N	7	14
IC E6	SN74LS164N	7	14
IC E7	SN74LS166AN	8	16
IC E8	SN74LS374N	10	20
IC E9	SN74LS166AN	8	16
IC E10	SN74LS166AN	8	16
IC E11	SN74LS374N	10	20
IC E12	SN74273N	10	20
IC F1	SN74LS164N	7	14
IC F2	SN74LS166AN	8	16
IC F3	SN74LS374N	10	20
IC F4	SN74LS166AN	8	16
IC F5	SN74LS374N	10	20
IC F6	SN74LS164N	7	14
IC F7	SN74LS166AN	8	16
IC F8	SN74LS164N	7	14
IC F9	SN74LS164N	7	14
IC F10	SN74LS374N	10	20
IC F11	SN74LS374N	10	20
IC F12	SN74LS04N	7	14
IC G1	SN74LS166AN	8	16
IC G2	MSM5128-12RS	12	24
IC G4	MSM5128-12RS	12	24
IC G5	MSM5128-12RS	12	24
IC G7	MSM5128-12RS	12	24
IC G9	MSM5128-12RS	12	24
IC G10	MSM5128-12RS	12	24
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IC H1	SN74LS161AN	8	16
IC H2	SN74LS157N	8	16
IC H3	SN74LS157N	8	16
IC H4	SN74LS157N	8	16
IC H5	SN74LS157N	8	16
IC H6	SN74LS161AN	8	16
IC H7	SN74LS157N	8	16
IC H8	SN74LS157N	8	16
IC H9	SN74LS163AN	8	16
IC H10	SN74LS163AN	8	16
IC H11	SN74LS163AN	8	16
IC H12	SN7404N	7	14

Ref. No.	Type	Pin No. GND	Pin No. +5V
IC J1	SN74LS161AN	8	16
IC J2	SN74LS161AN	8	16
IC J3	SN74LS175N	8	16
IC J4	SN74LS175N	8	16
IC J5	SN74LS163AN	8	16
IC J6	SN74LS161AN	8	16
IC J7	SN74LS157N	8	16
IC J8	SN74LS157N	8	16
IC J9	MBM2149L-55	9	18
IC J10	MBM2149L-55	9	18
IC J11	SN74LS374N	10	20
IC J12	SN74LS74AN	7	14
IC K2	SN74LS161AN	8	16
IC K3	SN74LS175N	8	16
IC K4	SN74LS163AN	8	16
IC K5	SN74LS85N	8	16
IC K6	SN74LS191N	8	16
IC K7	SN74LS161AN	8	16
IC K8	SN74LS161AN	8	16
IC K9	SN74LS123N	8	16
IC K11	SN74LS02N	7	14
IC K12	SN74LS04N	7	14
IC L2	SN74LS221N	8	16
IC L3	SN74LS161AN	8	16
IC L4	SN74LS151N	8	16
IC L5	SN74LS393N	7	14
IC L6	SN74LS00N	7	14
IC L7	SN74LS08N	7	14
IC L8	SN74LS191N	8	16
IC L9	SN74LS161AN	8	16
IC L10	SN74LS74AN	7	14
IC L11	SN74LS374N	10	20
IC M1	SN7408N	7	14
IC M2	SN74LS164N	7	14
IC M3	SN74LS74AN	7	14
IC M4	SN74LS30N	7	14
IC M5	SN74LS04N	7	14
IC M6	SN74LS74AN	7	14
IC M7	SN74LS221N	8	16
IC M8	SN74LS00N	7	14
IC M9	SN74LS04N	7	14
IC M10	SN7400N	7	14
IC M11	SN74LS374N	10	20
IC N2	SN74LS164N	7	14
IC N3	SN74LS74AN	7	14
IC N4	SN74LS74AN	7	14
IC N5	SN74LS04N	7	14
IC N7	SN74LS123N	8	16
IC N8	SN7404N	7	14
IC N9	SN74LS161AN	8	16
IC N10	SN74LS161AN	8	16
IC N11	SN74LS04N	7	14
IC N12	SN74LS04N	7	14
IC P6	SN74LS00N	7	14
IC P7	SN74LS164N	7	14
IC P8	SN7404N	7	14
IC P9	SN74LS00N	7	14
IC P10	SN74LS161AN	8	16



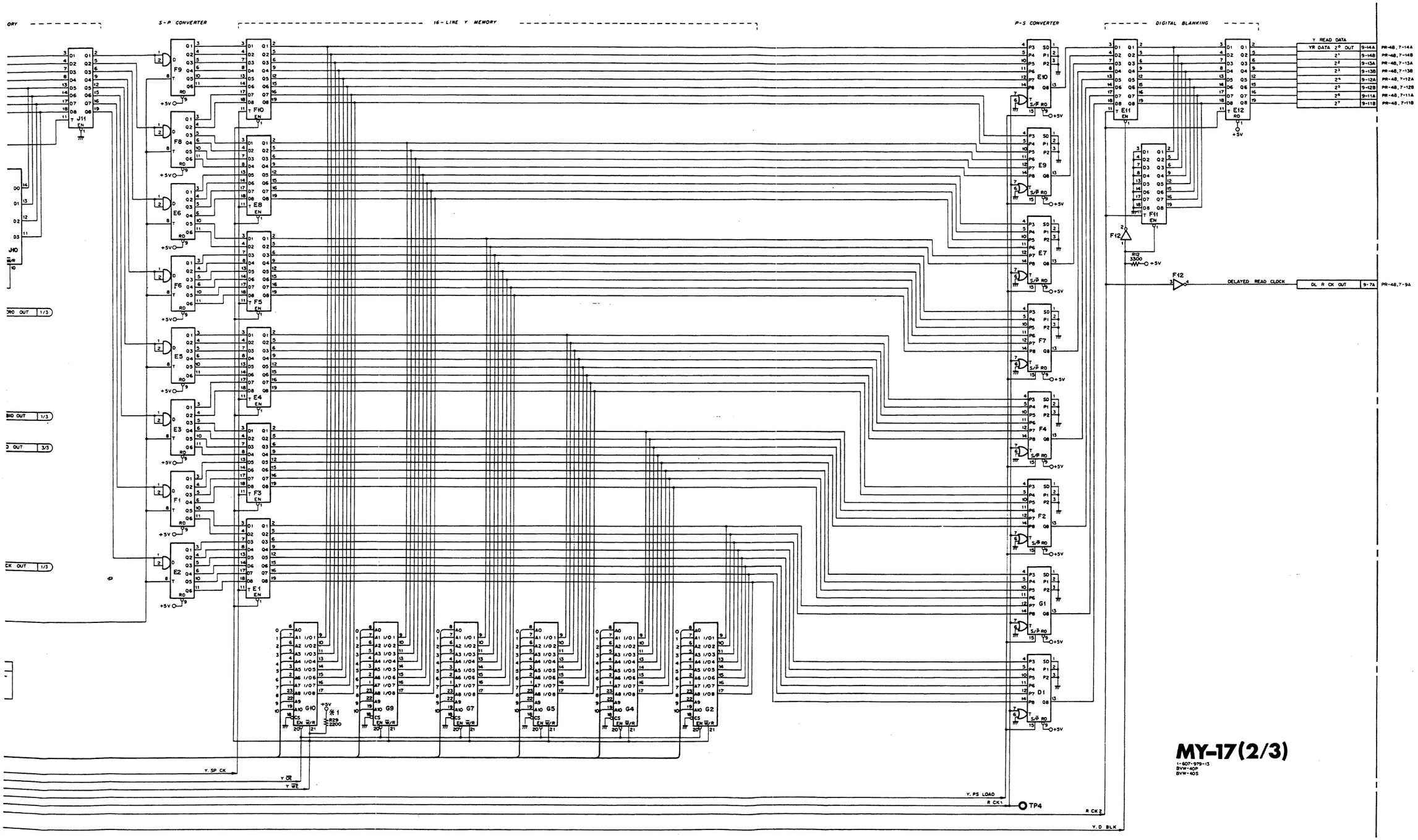

B C D E F G H J K L M N P
TP1 K - 10
TP2 H - 12
TP3 J - 12
TP4 E - 9
TP5 P - 11
TP6 F - 12
TP7 N - 8
TP8 P - 11
TPE1 A - 2
TPE2 P - 1
TPE3 G - 7
TPE4 A - 12
TPE5 P - 12
MY-17
607-979-13
1A — 30A---COMPONENT SIDE
1B — 30B----SOLDERING SIDE
MY-17-SOLDERING SIDE-
607-979-13
SVW-40
SVW-40P
SVW-40S

MY-17 (2/3) (VIDEO TBC)



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	R27, R28 } 200 → 220 R29 2200 ADDED	P: 10711 ~



MY-17(2/3)

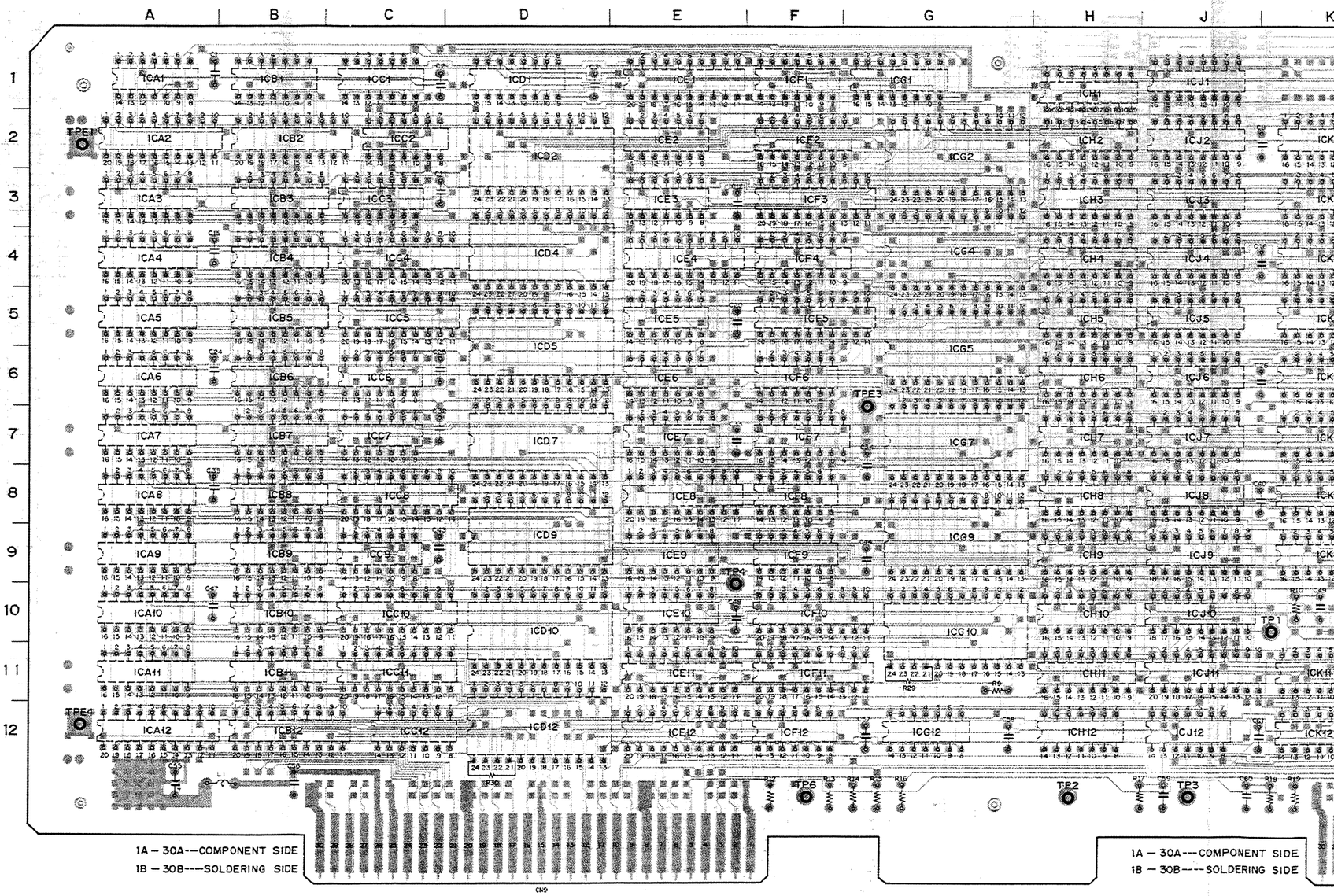
1-607-979-13
BVW-40P
BVW-40S

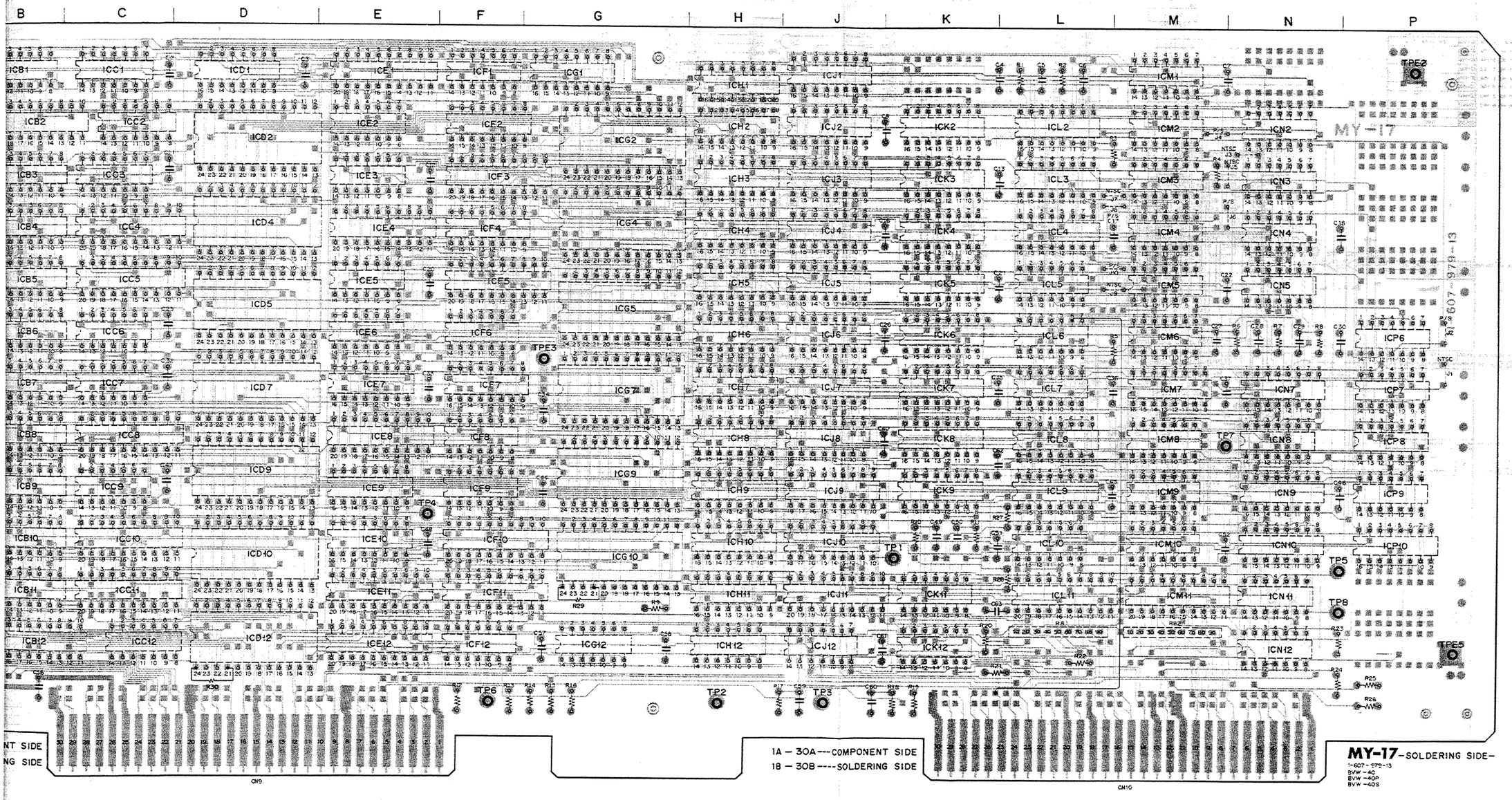
MY-17 MY-17

MY-17 (VIDEO TBC)

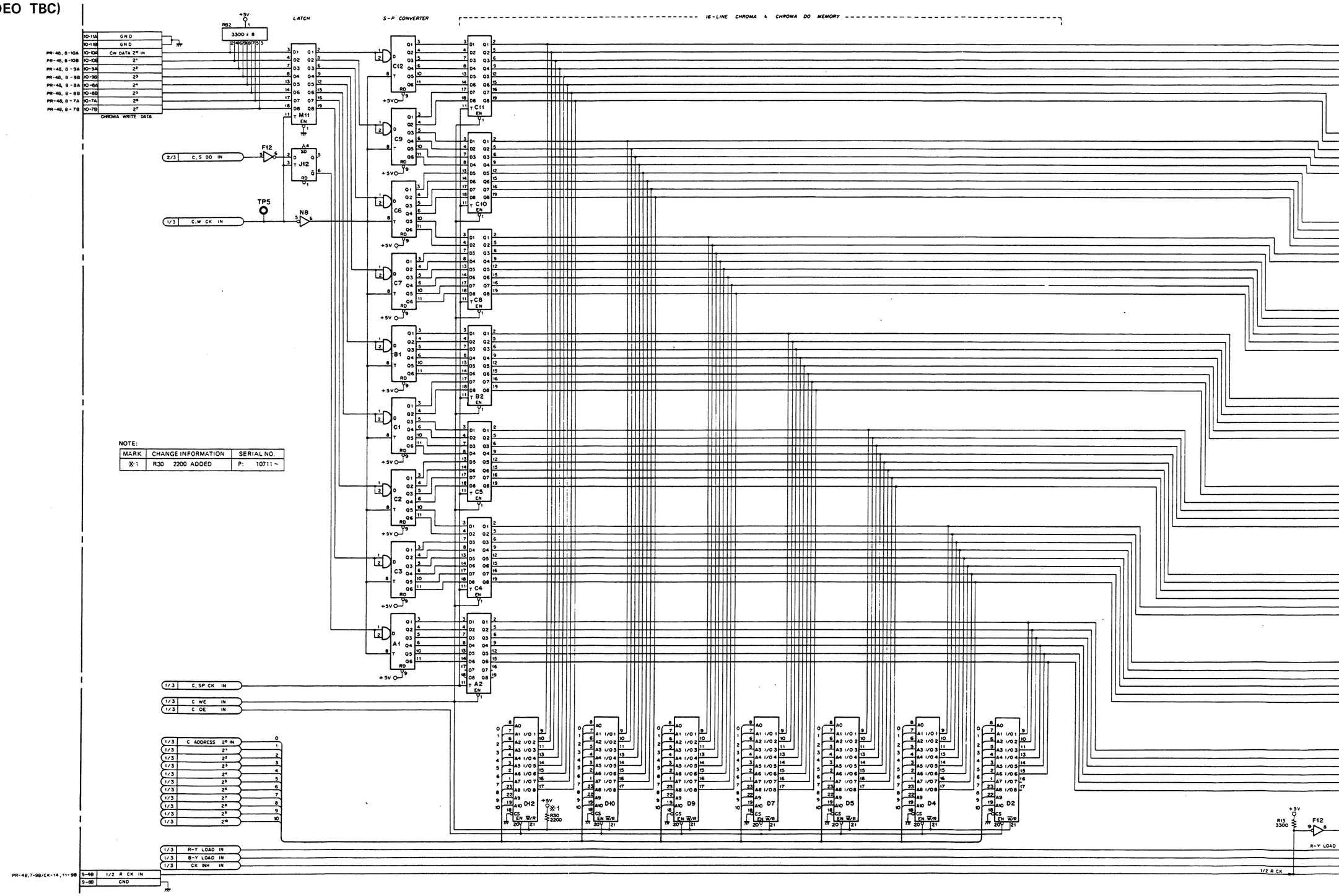
Ref. No.	Type	Pin No. GND	Pin No. +5V
IC A1	SN74LS164N	7	14
IC A2	SN74LS374N	10	20
IC A3	SN74LS166AN	8	16
IC A4	SN74LS166AN	8	16
IC A5	SN74LS166AN	8	16
IC A6	SN74LS166AN	8	16
IC A7	SN74LS166AN	8	16
IC A8	SN74LS166AN	8	16
IC A9	SN74LS166AN	8	16
IC A10	SN74LS166AN	8	16
IC A11	SN74LS166AN	8	16
IC A12	SN74LS374N	10	20
IC B1	SN74LS164N	7	14
IC B2	SN74LS374N	10	20
IC B3	SN74LS166AN	8	16
IC B4	SN74LS166AN	8	16
IC B5	SN74LS166AN	8	16
IC B6	SN74LS166AN	8	16
IC B7	SN74LS166AN	8	16
IC B8	SN74LS166AN	8	16
IC B9	SN74LS166AN	8	16
IC B10	SN74LS166AN	8	16
IC B11	SN74LS166AN	8	16
IC B12	SN74LS374N	10	20
IC C1	SN74LS164N	7	14
IC C2	SN74LS164N	7	14
IC C3	SN74LS164N	7	14
IC C4	SN74LS374N	10	20
IC C5	SN74LS374N	10	20
IC C6	SN74LS164N	7	14
IC C7	SN74LS164N	7	14
IC C8	SN74LS374N	10	20
IC C9	SN74LS164N	7	14
IC C10	SN74LS374N	10	20
IC C11	SN74LS374N	10	20
IC C12	SN74LS164N	7	14
IC D1	SN74LS166AN	8	16
IC D2	MSM5128 - 12RS	12	24
IC D4	MSM5128 - 12RS	12	24
IC D5	MSM5128 - 12RS	12	24
IC D7	MSM5128 - 12RS	12	24
IC D9	MSM5128 - 12RS	12	24
IC D10	MSM5128 - 12RS	12	24
IC D12	MSM5128 - 12RS	12	24
IC E1	SN74LS374N	10	20
IC E2	SN74LS164N	7	14
IC E3	SN74LS164N	7	14
IC E4	SN74LS374N	10	20
IC E5	SN74LS164N	7	14
IC E6	SN74LS164N	7	14
IC E7	SN74LS166AN	8	16
IC E8	SN74LS374N	10	20
IC E9	SN74LS166AN	8	16
IC E10	SN74LS166AN	8	16
IC E11	SN74LS374N	10	20
IC E12	SN74273N	10	20
IC F1	SN74LS164N	7	14
IC F2	SN74LS166AN	8	16
IC F3	SN74LS374N	10	20
IC F4	SN74LS166AN	8	16
IC F5	SN74LS374N	10	20
IC F6	SN74LS164N	7	14
IC F7	SN74LS166AN	8	16
IC F8	SN74LS164N	7	14
IC F9	SN74LS164N	7	14
IC F10	SN74LS374N	10	20
IC F11	SN74LS374N	10	20
IC F12	SN74LS04N	7	14
IC G1	SN74LS166AN	8	16
IC G2	MSM5128 - 12RS	12	24
IC G4	MSM5128 - 12RS	12	24
IC G5	MSM5128 - 12RS	12	24
IC G7	MSM5128 - 12RS	12	24
IC G9	MSM5128 - 12RS	12	24
IC G10	MSM5128 - 12RS	12	24
IC G12	SN74LS164N	7	14
IC H1	SN74LS161AN	8	16
IC H2	SN74LS157N	8	16
IC H3	SN74LS157N	8	16
IC H4	SN74LS157N	8	16
IC H5	SN74LS157N	8	16
IC H6	SN74LS161AN	8	16
IC H7	SN74LS157N	8	16
IC H8	SN74LS157N	8	16
IC H9	SN74LS163AN	8	16
IC H10	SN74LS163AN	8	16
IC H11	SN74LS163AN	8	16
IC H12	SN7404N	7	14

Ref. No.	Type	Pin No. GND	Pin No. +5V
IC J1	SN74LS161AN	8	16
IC J2	SN74LS161AN	8	16
IC J3	SN74LS175N	8	16
IC J4	SN74LS175N	8	16
IC J5	SN74LS163AN	8	16
IC J6	SN74LS161AN	8	16
IC J7	SN74LS157N	8	16
IC J8	SN74LS157N	8	16
IC J9	MBM2149L-55	9	18
IC J10	MBM2149L-55	9	18
IC J11	SN74LS374N	10	20
IC J12	SN74LS74AN	7	14
IC K2	SN74LS161AN	8	16
IC K3	SN74LS175N	8	16
IC K4	SN74LS163AN	8	16
IC K5	SN74LS85N	8	16
IC K6	SN74LS191N	8	16
IC K7	SN74LS161AN	8	16
IC K8	SN74LS161AN	8	16
IC K9	SN74LS123N	8	16
IC K11	SN74LS02N	7	14
IC K12	SN74LS04N	7	14
IC L2	SN74LS221N	8	16
IC L3	SN74LS161AN	8	16
IC L4	SN74LS151N	8	16
IC L5	SN74LS393N	7	14
IC L6	SN74LS00N	7	14
IC L7	SN74LS08N	7	14
IC L8	SN74LS191N	8	16
IC L9	SN74LS161AN	8	16
IC L10	SN74LS74AN	7	14
IC L11	SN74LS374N	10	20
IC M1	SN7408N	7	14
IC M2	SN74LS164N	7	14
IC M3	SN74LS74AN	7	14
IC M4	SN74LS30N	7	14
IC M5	SN74LS04N	7	14
IC M6	SN74LS74AN	7	14
IC M7	SN74LS221N	8	16
IC M8	SN74LS00N	7	14
IC M9	SN74LS04N	7	14
IC M10	SN7400N	7	14
IC M11	SN74LS374N	10	20
IC N2	SN74LS164N	7	14
IC N3	SN74LS74AN	7	14
IC N4	SN74LS74AN	7	14
IC N5	SN74LS04N	7	14
IC N7	SN74LS123N	8	16
IC N8	SN7404N	7	14
IC N9	SN74LS161AN	8	16
IC N10	SN74LS161AN	8	16
IC N11	SN74LS04N	7	14
IC N12	SN74LS04N	7	14
IC P6	SN74LS00N	7	14
IC P7	SN74LS164N	7	14
IC P8	SN7404N	7	14
IC P9	SN74LS00N	7	14
IC P10	SN74LS161AN	8	16



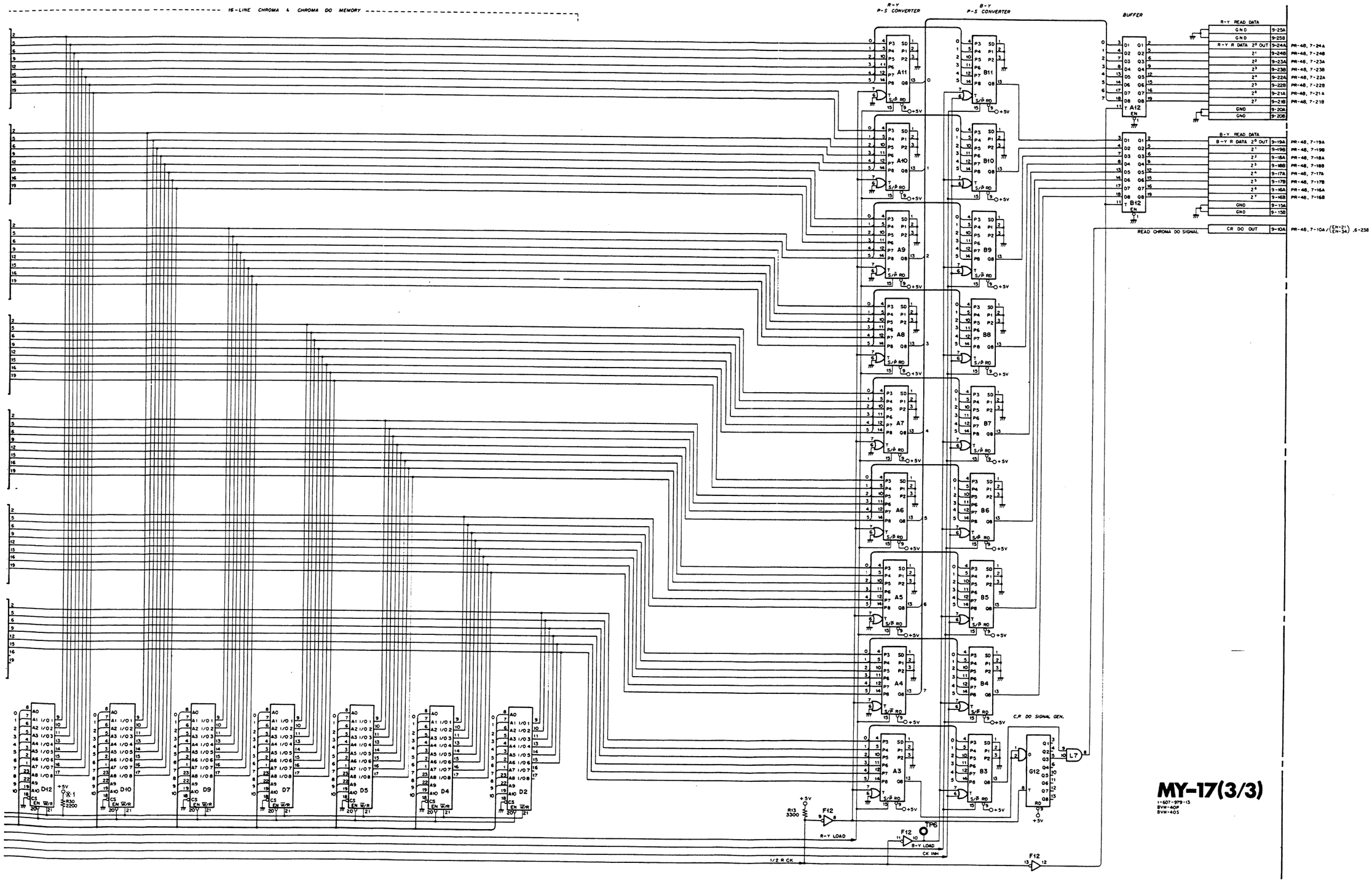

B C D E F G H J K L M N P
TP1 K - 10
TP2 H - 12
TP3 J - 12
TP4 E - 9
TP5 P - 11
TP6 F - 12
TP7 N - 8
TP8 P - 11
TPE1 A - 2
TPE2 P - 1
TPE3 G - 7
TPE4 A - 12
TPE5 P - 12
MY-17
1A — 30A---COMPONENT SIDE
1B — 30B----SOLDERING SIDE
MY-17-SOLDERING SIDE-
1-607-979-13
BVW-40
BVW-40P
BVW-40S

MY-17 (3/3) (VIDEO TBC)



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	R30 2200 ADDED	P: 10711 ~



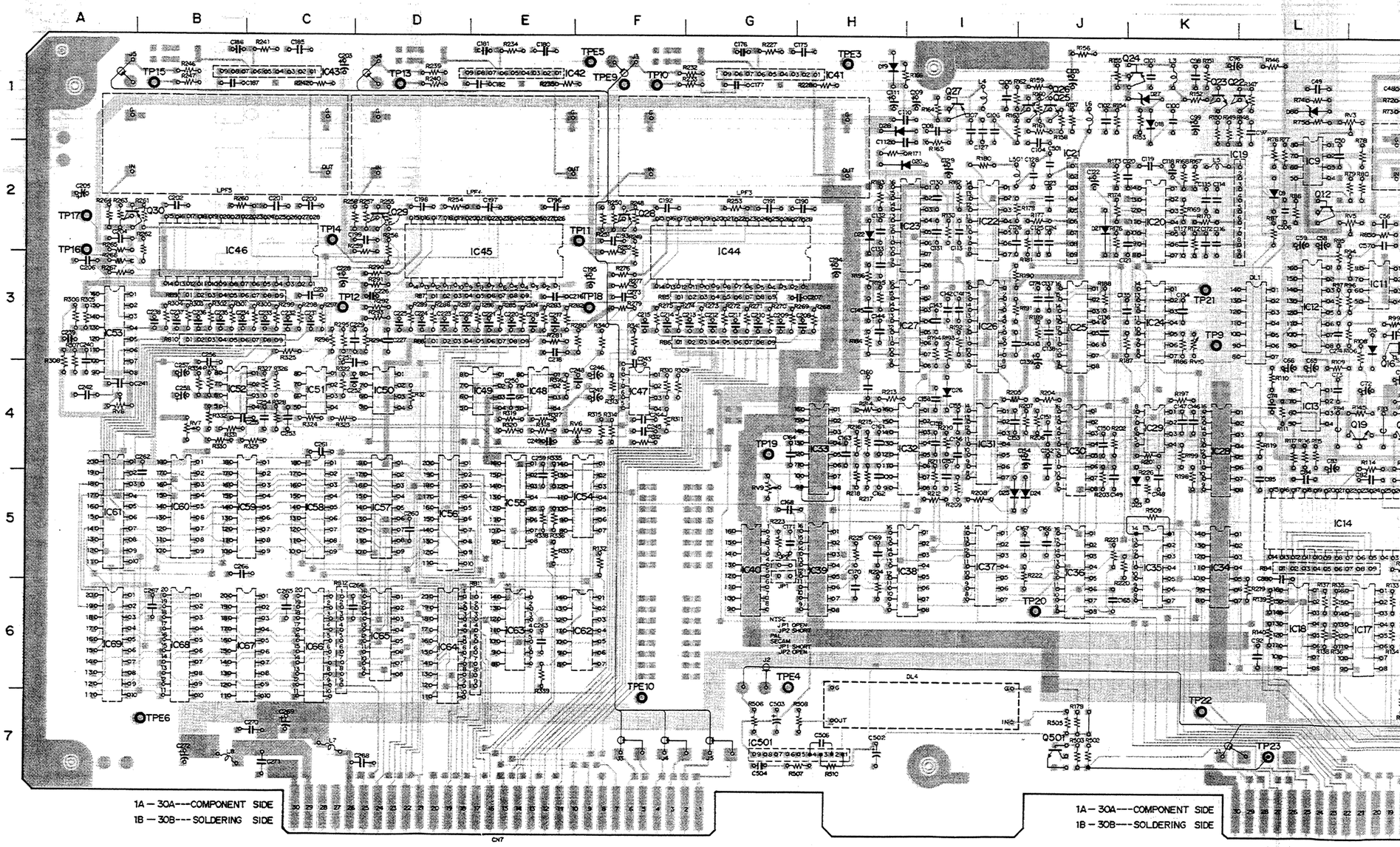
MY-17(3/3)
1-607-979-13
BVW-40P
BVW-40S

PR-48 PR-48

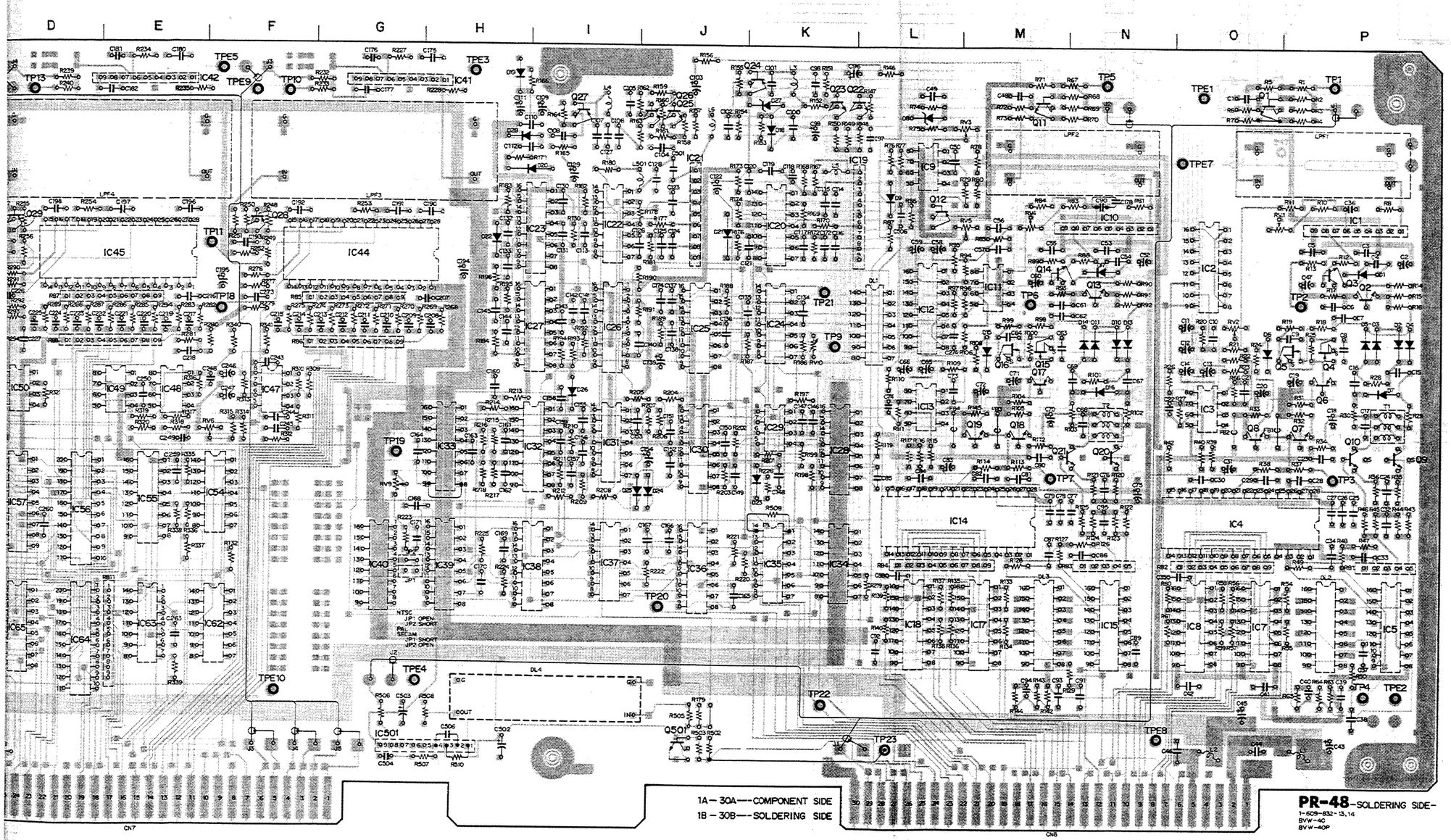
PR-48 (VIDEO TBC)

UP TO S/N 11040 (P)
UP TO S/N 10025 (S)

Ref. No.	Type	Pin No. −11 V	−5V	GND	+5V	+11V	+12V
IC 1	BX365A	9		4, 7		3	
IC 2	HI-201-5	4		5		13	
IC 3	TL082CP	4				8	
IC 4	CX20052		14, 19, 23	4, 13, 15, 20, 22			
IC 5	HD10105		8		1, 16		
IC 7	HD10125		8	16	9		
IC 8	HD10125		8	16	9		
IC 9	μPC4557C	4				8	
IC 10	BX365A	9		4, 7		3	
IC 11	TL082CP	4				8	
IC 12	HI-201-5	4		5		13	
IC 13	TL082CP	4				8	
IC 14	CX20052		4, 19, 23	4, 13, 15, 20, 22			
IC 15	HD10105		8		1, 16		
IC 17	HD10125		8	16	9		
IC 18	HD10125		8	16	9		
IC 19	BX365A	9		4, 7		3	
IC 20	μPC319C	6				11	
IC 21	BX365A	9		4, 7		3	
IC 22	μPC319C	6		3, 8		11	
IC 23	HA1-4905-5	5		9	1	13	
IC 24	TL084CN	11				4	
IC 25	HI-201-5	4		5		13	
IC 26	SN74LS123N			8	16		
IC 27	HI-201-5	4		5		13	
IC 28	SN74LS221N			8	16		
IC 29	SN75454BP			4	8		
IC 30	HA1-4905-5	5		9	1	13	
IC 31	TL084CN	11				4	
IC 32	HA1-4905-5	5		9	1	13	
IC 33	HI-201-5	4		5		13	
IC 34	SN74LS00N			7	14		
IC 35	SN74LS74AN			7	14		
IC 36	SN74LS221N			8	16		
IC 37	SN74LS20N			7	14		
IC 38	TC4528BP			8	16		
IC 39	SN74LS221N			8	16		
IC 40	TC4022BP			8	16		
IC 41	BX365A	9		4, 7		3	
IC 42	BX365A	9		4, 7		3	
IC 43	BX365A	8		4, 7		3	
IC 44	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28		
IC 45	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28		
IC 46	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28		
IC 47	μPC4557C	4				8	
IC 48	TL082CP	4				8	
IC 49	TL607CP	5		1		8	
IC 50	TL607CP	5		1		8	
IC 51	TL082CP	4				8	
IC 52	μPC4557C	4				8	
IC 53	MC10198L			8	1, 16		
IC 54	SN74S22N			7	14		
IC 55	SN74LS163AN			8	16		
IC 56	SN74273N			10	20		
IC 57	MBM2149L-55			9	18		
IC 58	MBM2149L-55			9	18		
IC 59	MBM2149L-55			9	18		
IC 60	MBM2149L-55			9	18		
IC 61	SN74273N			10	20		
IC 62	SN74LS04N			7	14		
IC 63	SN74LS113AN			7	14		
IC 64	SN74LS374N			10	20		
IC 65	SN74LS163AN			8	16		
IC 66	SN74LS273N			10	20		
IC 67	SN74LS273N			10	20		
IC 68	SN74LS273N			10	20		
IC 69	SN74LS374N			10	20		
IC501	BX365A	9		4, 7		3	



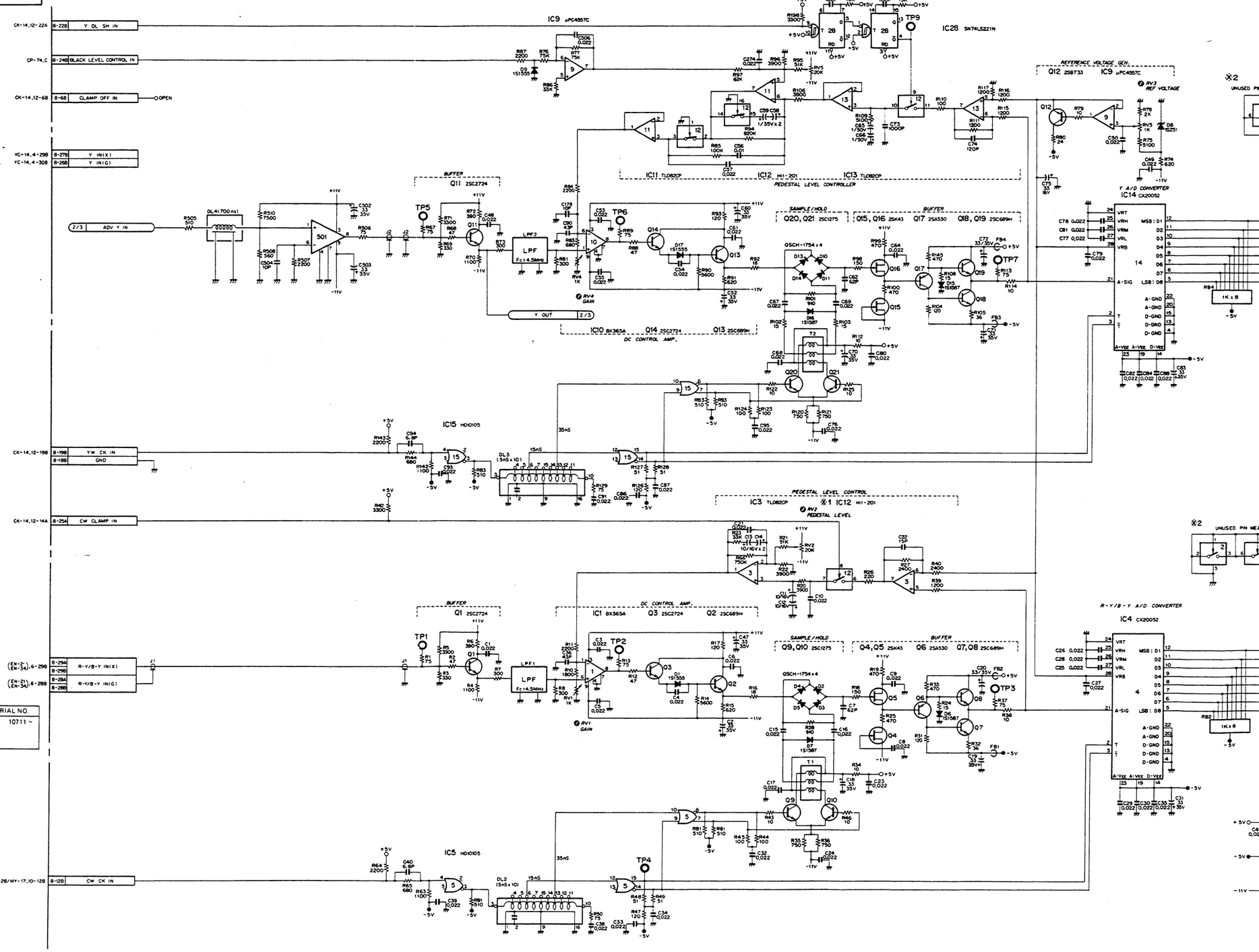
1A — 30A---COMPONENT SIDE
1B — 30B---SOLDERING SIDE

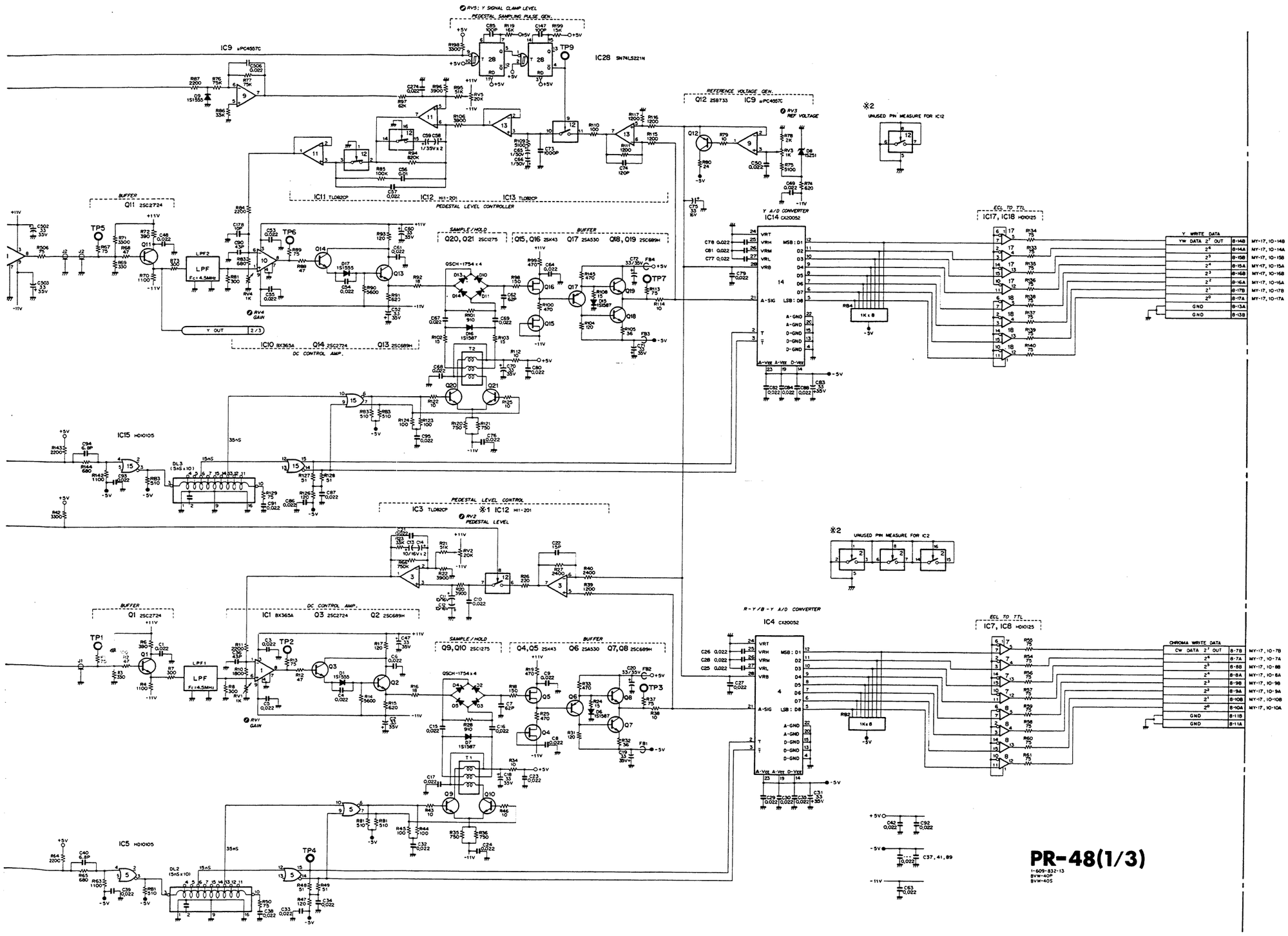


D1	P - 3	IC41	G - 1	RV1	O - 2
D2	P - 3	IC42	E - 1	RV2	O - 3
D3	P - 3	IC43	C - 1	RV3	M - 1
D4	P - 3	IC44	G - 2	RV4	M - 2
D5	P - 3	IC45	E - 2	RV5	M - 2
D6	O - 3	IC46	B - 2	RV6	F - 4
D7	L - 1	IC47	F - 4	RV7	B - 4
D8	L - 1	IC48	E - 4	RV8	A - 4
D9	L - 2	IC49	E - 4	RV9	G - 5
D10	N - 3	IC50	D - 4	RV10	K - 3
D11	N - 3	IC51	C - 4		
D13	N - 3	IC52	B - 4	T1	P - 4
D14	N - 3	IC53	A - 3	T2	N - 4
D15	M - 3	IC54	F - 5		
D16	N - 4	IC55	E - 5	TP1	P - 1
D17	N - 3	IC56	D - 5	TP2	P - 3
D18	K - 1	IC57	D - 5	TP3	P - 5
D19	H - 1	IC58	C - 5	TP4	P - 7
D20	I - 2	IC59	C - 5	TP5	N - 1
D21	J - 2	IC60	B - 5	TP6	M - 3
D22	H - 2	IC61	A - 5	TP7	M - 5
D23	K - 5	IC62	F - 6	TP9	K - 3
D24	J - 5	IC63	E - 6	TP10	F - 1
D25	J - 5	IC64	D - 6	TP11	F - 2
D26	I - 4	IC65	D - 6	TP12	C - 3
D27	K - 1	IC66	C - 6	TP13	D - 1
D28	H - 1	IC67	C - 6	TP14	C - 2
		IC68	B - 6	TP15	B - 1
DL1	L - 3	IC69	A - 6	TP16	A - 2
DL2	P - 6	IC501	G - 7	TP17	A - 2
DL3	M - 6			TP18	F - 3
DL4	H - 6	LPF1	P - 1	TP19	G - 4
		LPF2	N - 2	TP20	J - 6
IC1	P - 2	LPF3	C - 2	TP21	K - 3
IC2	O - 3	LPF4	E - 2	TP22	K - 7
IC3	O - 4	LPF5	B - 2	TP23	L - 7
IC4	O - 5				
IC5	P - 6	Q1	O - 1	TPE1	O - 1
IC7	O - 6	Q2	P - 3	TPE2	P - 7
IC8	O - 6	Q3	P - 3	TPE3	H - 1
IC9	L - 2	Q4	P - 3	TPE4	G - 6
IC10	N - 2	Q5	P - 3	TPE5	F - 1
IC11	M - 3	Q6	P - 4	TPE6	B - 7
IC12	L - 3	Q7	P - 4	TPE7	O - 2
IC13	L - 4	Q8	O - 4	TPE8	N - 7
IC14	M - 5	Q9	P - 4	TPE9	F - 1
IC15	N - 6	Q10	P - 4	TPE10	F - 7
IC17	M - 6	Q11	M - 1		
IC18	L - 6	Q12	L - 2		
IC19	L - 2	Q13	M - 3		
IC20	K - 2	Q14	M - 3		
IC21	J - 2	Q15	M - 3		
IC22	I - 2	Q16	M - 3		
IC23	I - 2	Q17	M - 4		
IC24	K - 3	Q18	M - 4		
IC25	J - 3	Q19	M - 4		
IC26	I - 3	Q20	N - 4		
IC27	I - 3	Q21	N - 4		
IC28	K - 4	Q22	K - 1		
IC29	K - 4	Q23	K - 1		
IC30	J - 4	Q24	K - 1		
IC31	I - 4	Q25	J - 1		
IC32	I - 4	Q26	J - 1		
IC33	H - 4	Q27	I - 1		
IC34	K - 5	Q28	F - 2		
IC35	K - 5	Q29	D - 2		
IC36	J - 5	Q30	A - 2		
IC37	I - 5	Q501	J - 7		
IC38	I - 5				
IC39	H - 5				
IC40	G - 5				

PR-48 (1/3) (VIDEO TBC)

UP TO S/N 11040 (P)
UP TO S/N 10025 (S)



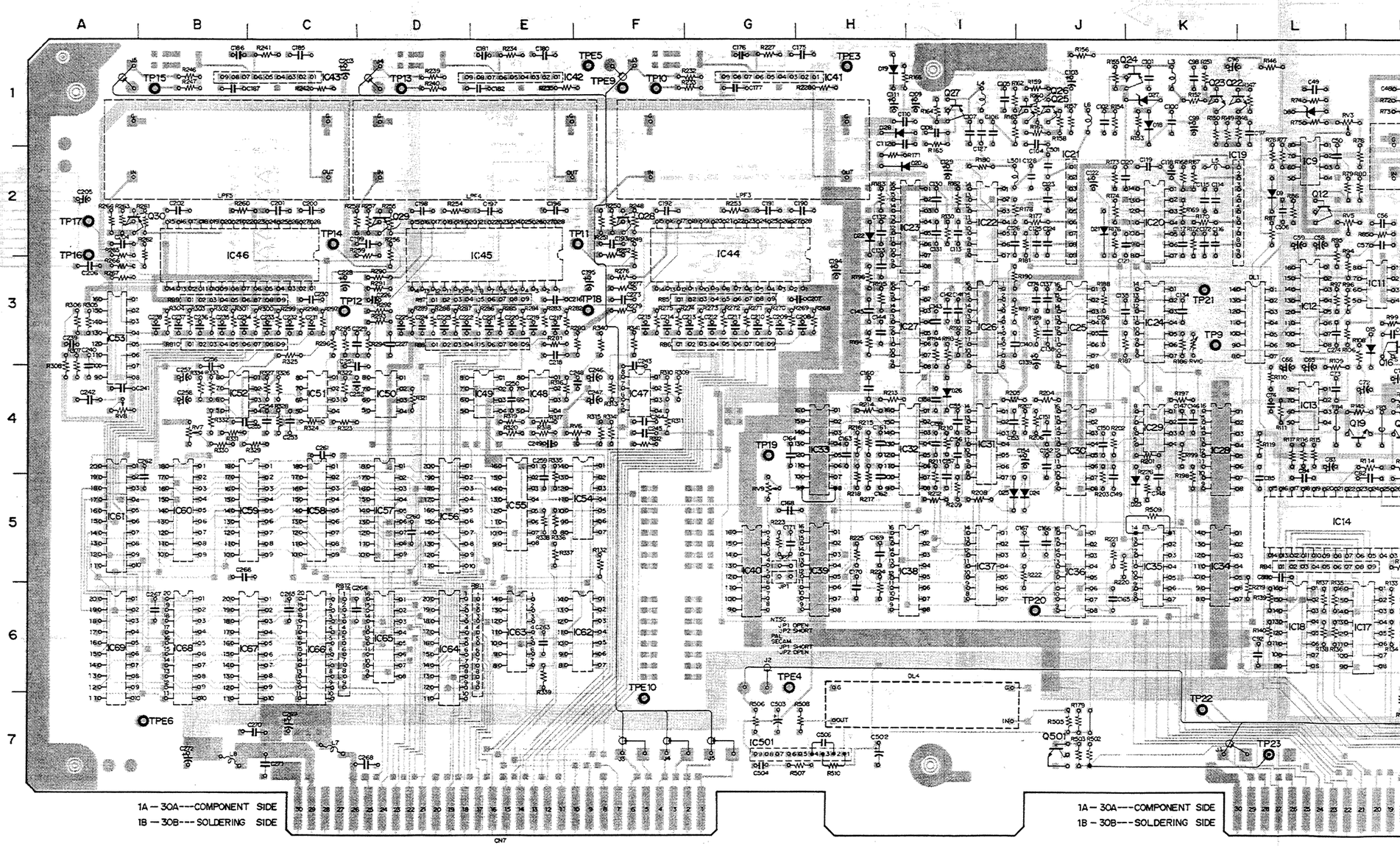

RV5: Y SIGNAL CLAMP LEVEL
PEDESTAL SAMPLING PULSE GEN.
IC9 μPC4557C
IC28 SN74LS221N
REFERENCE VOLTAGE GEN.
Q12 2SB733
IC9 μPC4557C
RV3 REF VOLTAGE
※2
UNUSED PIN MEASURE FOR IC12
BUFFER
Q11 2SC2724
IC11 TL082CP
IC12 HI1-201
IC13 TL082CP
PEDESTAL LEVEL CONTROLLER
Y A/D CONVERTER
IC14 CX20052
ECL TO TTL
IC17, IC18 HD10125
Y WRITE DATA
LPF
Fc=4.5MHz
SAMPLE/HOLD
Q20, Q21 2SC1275
Q15, Q16 2SK43
Q17 2SA530
Q18, Q19 2SC689H
OSCH-1754×4
IC10 BX365A
Q14 2SC2724
Q13 2SC689H
DC CONTROL AMP.
RV4 GAIN
IC15 HD10105
DL3 (5nS×10)
PEDESTAL LEVEL CONTROL
IC3 TL082CP
※1 IC12 HI1-201
RV2 PEDESTAL LEVEL
IC1 BX365A
Q3 2SC2724
Q2 2SC689H
RV1 GAIN
R-Y/B-Y A/D CONVERTER
IC4 CX20052
IC7, IC8 HD10125
CHROMA WRITE DATA
IC5 HD10105
DL2 (5nS×10)
PR-48(1/3)
1-609-832-13
8VW-40P
8VW-40S

PR-48 PR-48

PR-48 (VIDEO TBC)

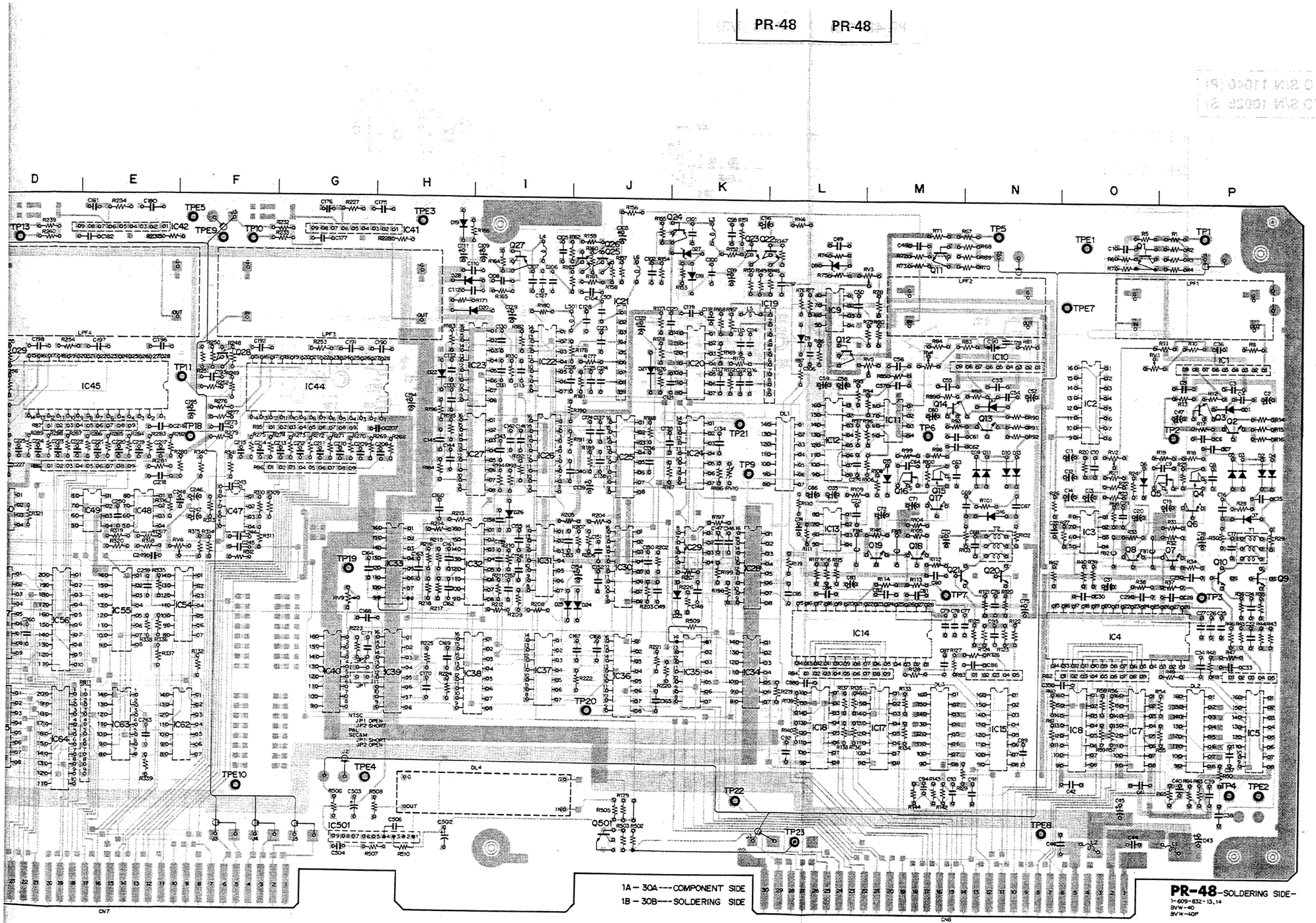
UP TO S/N 11040 (P)
UP TO S/N 10025 (S)

Ref. No.	Type	Pin No. −11V	−5V	GND	+5V	+11V	+12V
IC 1	BX365A	9		4, 7		3	
IC 2	HI1 - 201 - 5	4		5		13	
IC 3	TL082CP	4				8	
IC 4	CX20052		14, 19, 23	4, 13, 15, 20, 22			
IC 5	HD10105		8		1, 16		
IC 7	HD10125		8	16	9		
IC 8	HD10125		8	16	9		
IC 9	μPC4557C	4				8	
IC 10	BX365A	9		4, 7		3	
IC 11	TL082CP	4				8	
IC 12	HI1 - 201 - 5	4		5		13	
IC 13	TL082CP	4				8	
IC 14	CX20052		4, 19, 23	4, 13, 15, 20, 22			
IC 15	HD10105		8		1, 16		
IC 17	HD10125		8	16	9		
IC 18	HD10125		8	16	9		
IC 19	BX365A	9		4, 7		3	
IC 20	μPC319C	6				11	
IC 21	BX365A	9		4, 7		3	
IC 22	μPC319C	6		3, 8		11	
IC 23	HA1 - 4905 - 5	5		9	1	13	
IC 24	TL084CN	11				4	
IC 25	HI1 - 201 - 5	4		5		13	
IC 26	SN74LS123N			8	16		
IC 27	HI1 - 201 - 5	4		5		13	
IC 28	SN74LS221N			8	16		
IC 29	SN75454BP			4	8		
IC 30	HA1 - 4905 - 5	5		9	1	13	
IC 31	TL084CN	11				4	
IC 32	HA1 - 4905 - 5	5		9	1	13	
IC 33	HI1 - 201 - 5	4		5		13	
IC 34	SN74LS00N			7	14		
IC 35	SN74LS74AN			7	14		
IC 36	SN74LS221N			8	16		
IC 37	SN74LS20N			7	14		
IC 38	TC4528BP			8	16		
IC 39	SN74LS221N			8	16		
IC 40	TC40225BP			8	16		
IC 41	BX365A	9		4, 7		3	
IC 42	BX365A	9		4, 7		3	
IC 43	BX365A	8		4, 7		3	
IC 44	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28		
IC 45	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28		
IC 46	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28		
IC 47	μPC4557C	4				8	
IC 48	TL082CP	4				8	
IC 49	TL607CP	5		1		6	
IC 50	TL607CP	5		1		6	
IC 51	TL082CP	4				8	
IC 52	μPC4557C	4				8	
IC 53	MC10198L			8	1, 16		
IC 54	SN74S32N			7	14		
IC 55	SN74LS163AN			8	16		
IC 56	SN74273N			10	20		
IC 57	MBM2149L - 55			9	18		
IC 58	MBM2149L - 55			9	18		
IC 59	MBM2149L - 55			9	18		
IC 60	MBM2149L - 55			9	18		
IC 61	SN74273N			10	20		
IC 62	SN74LS00N			7	14		
IC 63	SN74LS11[illegible]			7	14		
IC 64	SN74LS374N			10	20		
IC 65	SN74LS163AN			8	16		
IC 66	SN74LS273N			10	20		
IC 67	SN74LS273N			10	20		
IC 68	SN74LS273N			10	20		
IC 69	SN74LS374N			10	20		
IC501	BX365A	9		4, 7		3	



18-110 (a)

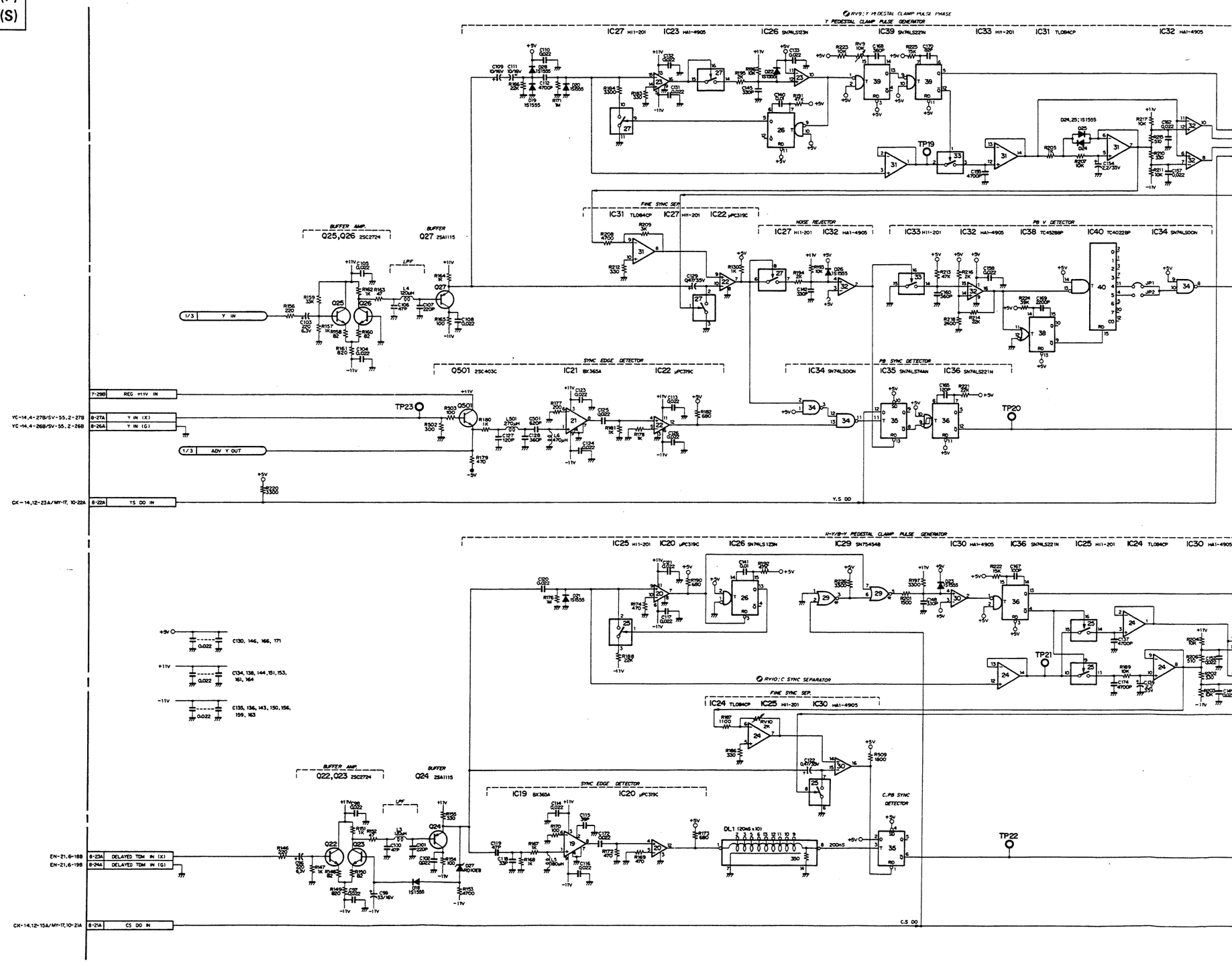
18-111 (a)

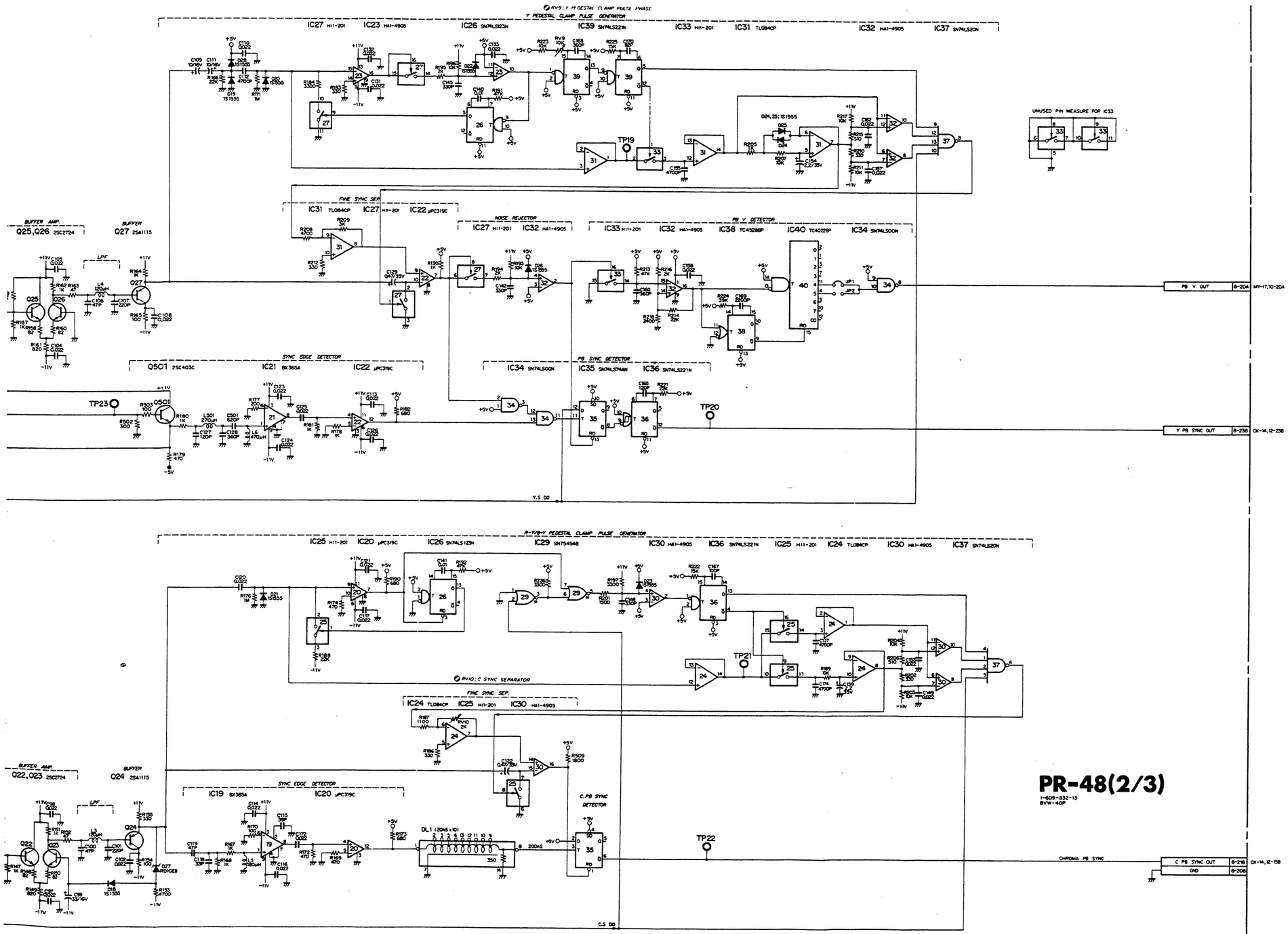


D1	P - 3	IC41	G - 1	RV1	O - 2
D2	P - 3	IC42	E - 1	RV2	O - 3
D3	P - 3	IC43	C - 1	RV3	M - 1
D4	P - 3	IC44	G - 2	RV4	M - 2
D5	P - 3	IC45	E - 2	RV5	M - 2
D6	O - 3	IC46	B - 2	RV6	F - 4
D7	P - 4	IC47	F - 4	RV7	B - 4
D8	L - 1	IC48	E - 4	RV8	A - 4
D9	L - 2	IC49	E - 4	RV9	G - 5
D10	N - 3	IC50	D - 4	RV10	K - 3
D11	N - 3	IC51	C - 4		
D13	N - 3	IC52	B - 4	T1	P - 4
D14	N - 3	IC53	A - 3	T2	N - 4
D15	M - 3	IC54	F - 5		
D16	N - 4	IC55	E - 5	TP1	P - 1
D17	N - 3	IC56	D - 5	TP2	P - 3
D18	K - 1	IC57	D - 5	TP3	P - 5
D19	H - 1	IC58	C - 5	TP4	P - 7
D20	I - 2	IC59	C - 5	TP5	N - 1
D21	J - 2	IC60	B - 5	TP6	M - 3
D22	H - 2	IC61	A - 5	TP7	M - 5
D23	K - 5	IC62	F - 6	TP9	K - 3
D24	J - 5	IC63	B - 6	TP10	F - 1
D25	J - 5	IC64	D - 6	TP11	F - 2
D26	I - 4	IC65	D - 6	TP12	C - 3
D27	K - 1	IC66	C - 6	TP13	D - 1
D28	H - 1	IC67	C - 6	TP14	C - 2
		IC68	B - 6	TP15	B - 1
DL1	L - 3	IC69	A - 6	TP16	A - 2
DL2	P - 6	IC501	G - 7	TP17	A - 2
DL3	M - 6			TP18	F - 3
DL4	H - 6	LPF1	P - 1	TP19	G - 4
		LPF2	N - 2	TP20	J - 6
IC1	P - 2	LPF3	G - 2	TP21	K - 3
IC2	C - 3	LPF4	E - 2	TP22	K - 7
IC3	O - 4	LPF5	B - 2	TP23	L - 7
IC4	O - 5				
IC5	P - 6	Q1	O - 1	TPE1	O - 1
IC7	O - 6	Q2	P - 3	TPE2	P - 7
IC8	O - 6	Q3	P - 3	TPE3	H - 1
IC9	L - 2	Q4	P - 3	TPE4	G - 6
IC10	N - 2	Q5	P - 3	TPE5	F - 1
IC11	M - 3	Q6	P - 4	TPE6	B - 7
IC12	L - 5	Q7	P - 4	TPE7	O - 2
IC13	L - 4	Q8	O - 4	TPE8	N - 7
IC14	M - 5	Q9	P - 4	TPE9	F - 1
IC15	N - 6	Q10	P - 4	TPE10	F - 7
IC17	M - 6	Q11	M - 1		
IC18	L - 6	Q12	L - 2		
IC19	L - 2	Q13	N - 3		
IC20	K - 2	Q14	M - 3		
IC21	J - 2	Q15	M - 3		
IC22	I - 2	Q16	M - 3		
IC23	I - 2	Q17	M - 4		
IC24	K - 3	Q18	M - 4		
IC25	J - 3	Q19	M - 4		
IC26	I - 3	Q20	N - 4		
IC27	I - 3	Q21	N - 4		
IC28	K - 4	Q22	K - 1		
IC29	K - 4	Q23	K - 1		
IC30	J - 4	Q24	K - 1		
IC31	I - 4	Q25	J - 1		
IC32	I - 4	Q26	J - 1		
IC33	H - 4	Q27	I - 1		
IC34	K - 5	Q28	F - 2		
IC35	K - 5	Q29	D - 2		
IC36	J - 5	Q30	A - 2		
IC37	I - 5	Q501	J - 7		
IC38	I - 5				
IC39	H - 5				
IC40	G - 5				

PR-48 (2/3) (VIDEO TBC)

UP TO S/N 11040 (P)
UP TO S/N 10025 (S)





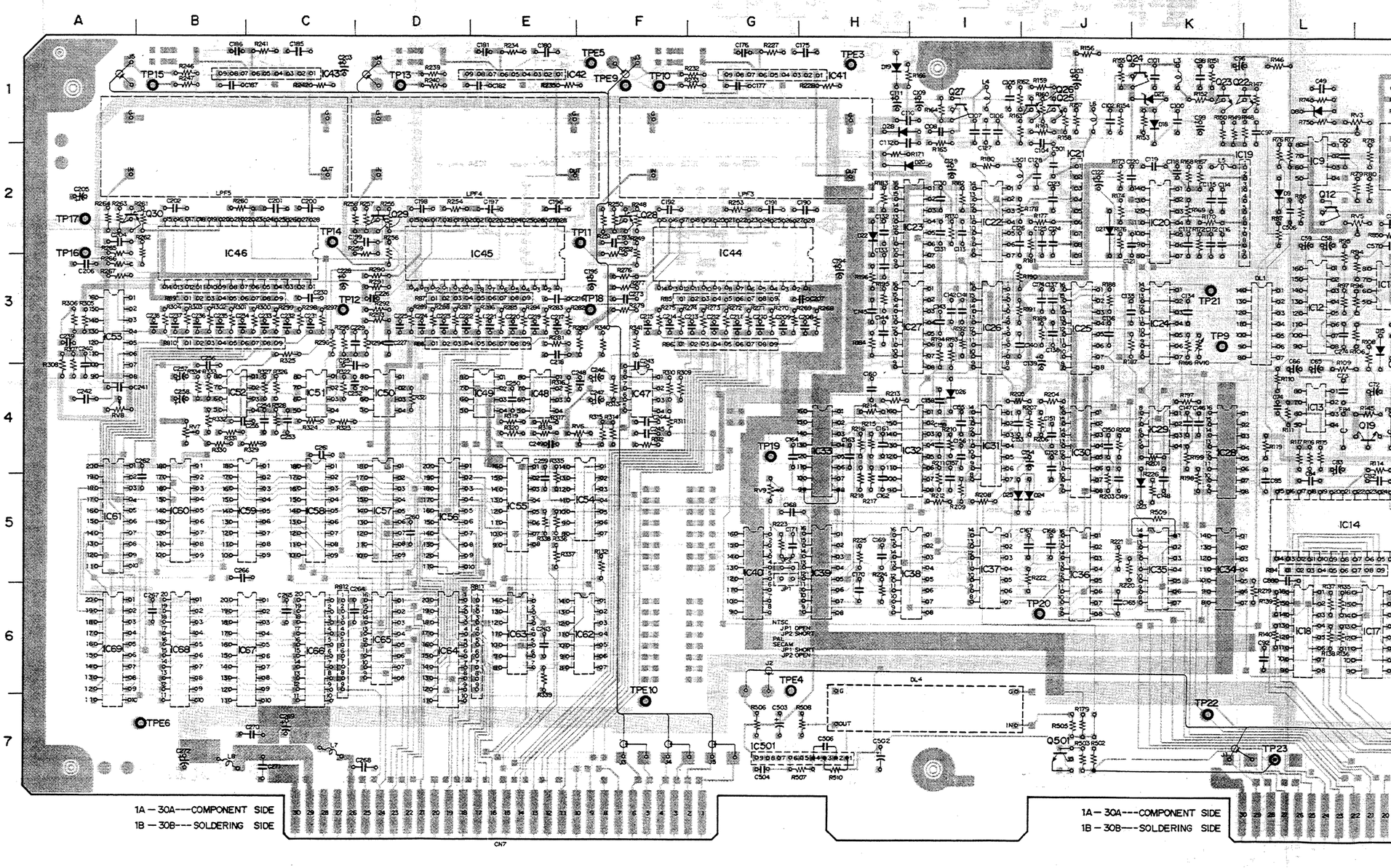
PR-48(2/3)
1-609-832-13
SVM-40P

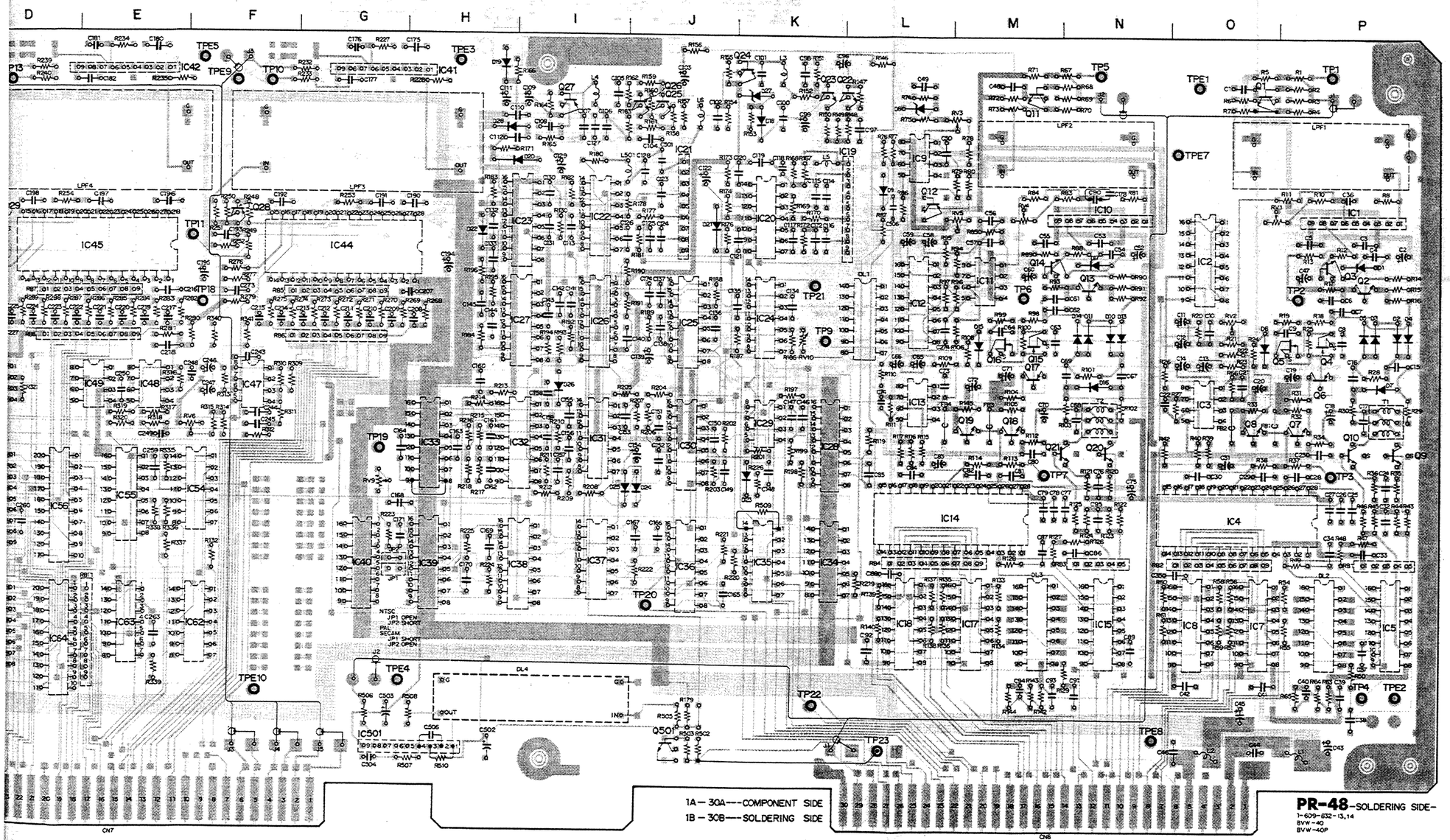
PR-48 PR-48

PR-48 (VIDEO TBC)

UP TO S/N 11040 (P)
UP TO S/N 10025 (S)

Ref. No.	Type	Pin No.					
		−11V	−5V	GND	+5V	+11V	+12V
IC 1	BX365A	9		4, 7		3	
IC 2	HI-201-5	4		5		13	
IC 3	TL082CP	4				8	
IC 4	CX20052		14, 19, 23	4, 13, 15, 20, 22			
IC 5	HD10105		8		1, 16		
IC 7	HD10125		8	16	9		
IC 8	HD10125		8	16	9		
IC 9	μPC4557C	4				8	
IC 10	BX365A	9		4, 7		3	
IC 11	TL082CP	4				8	
IC 12	HI-201-5	4		5		13	
IC 13	TL082CP	4				8	
IC 14	CX20052		4, 19, 23	4, 13, 15, 20, 22			
IC 15	HD10105		8		1, 16		
IC 17	HD10125		8	16	9		
IC 18	HD10125		8	16	9		
IC 19	BX365A	9		4, 7		3	
IC 20	μPC319C	6				11	
IC 21	BX365A	9		4, 7		3	
IC 22	μPC319C	6		3, 8		11	
IC 23	HA1-4905-5	5		9	1	13	
IC 24	TL084CN	11				4	
IC 25	HI-201-5	4		5		13	
IC 26	SN74LS123N			8	16		
IC 27	HI-201-5	4		5		13	
IC 28	SN74LS221N			8	16		
IC 29	SN75454BP			4	8		
IC 30	HA1-4905-5	5		9	1	13	
IC 31	TL084CN	11				4	
IC 32	HA1-4905-5	5		9	1	13	
IC 33	HI-201-5	4		5		13	
IC 34	SN74LS00N			7	14		
IC 35	SN74LS74AN			7	14		
IC 36	SN74LS221N			8	16		
IC 37	SN74LS20N			7	14		
IC 38	TC4528BP			8	16		
IC 39	SN74LS221N			8	16		
IC 40	TC4022BP			8	16		
IC 41	BX365A	9		4, 7		3	
IC 42	BX365A	9		4, 7		3	
IC 43	BX365A	8		4, 7		3	
IC 44	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28		
IC 45	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28		
IC 46	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28		
IC 47	μPC4557C	4				8	
IC 48	TL082CP	4				8	
IC 49	TL607CP	5		1		8	
IC 50	TL607CP	5		1		8	
IC 51	TL082CP	4				8	
IC 52	μPC4557C	4				8	
IC 53	MC10198L			8	1, 16		
IC 54	SN74S32N			7	14		
IC 55	SN74LS163AN			8	16		
IC 56	SN74273N			10	20		
IC 57	MBM2149L-55			9	18		
IC 58	MBM2149L-55			9	18		
IC 59	MBM2149L-55			9	18		
IC 60	MBM2149L-55			9	18		
IC 61	SN74273N			10	20		
IC 62	SN74LS04N			7	14		
IC 63	SN74LS113AN			7	14		
IC 64	SN74LS374N			10	20		
IC 65	SN74LS163AN			8	16		
IC 66	SN74LS273N			10	20		
IC 67	SN74LS273N			10	20		
IC 68	SN74LS273N			10	20		
IC 69	SN74LS374N			10	20		
IC501	BX365A	9		4, 7		3	



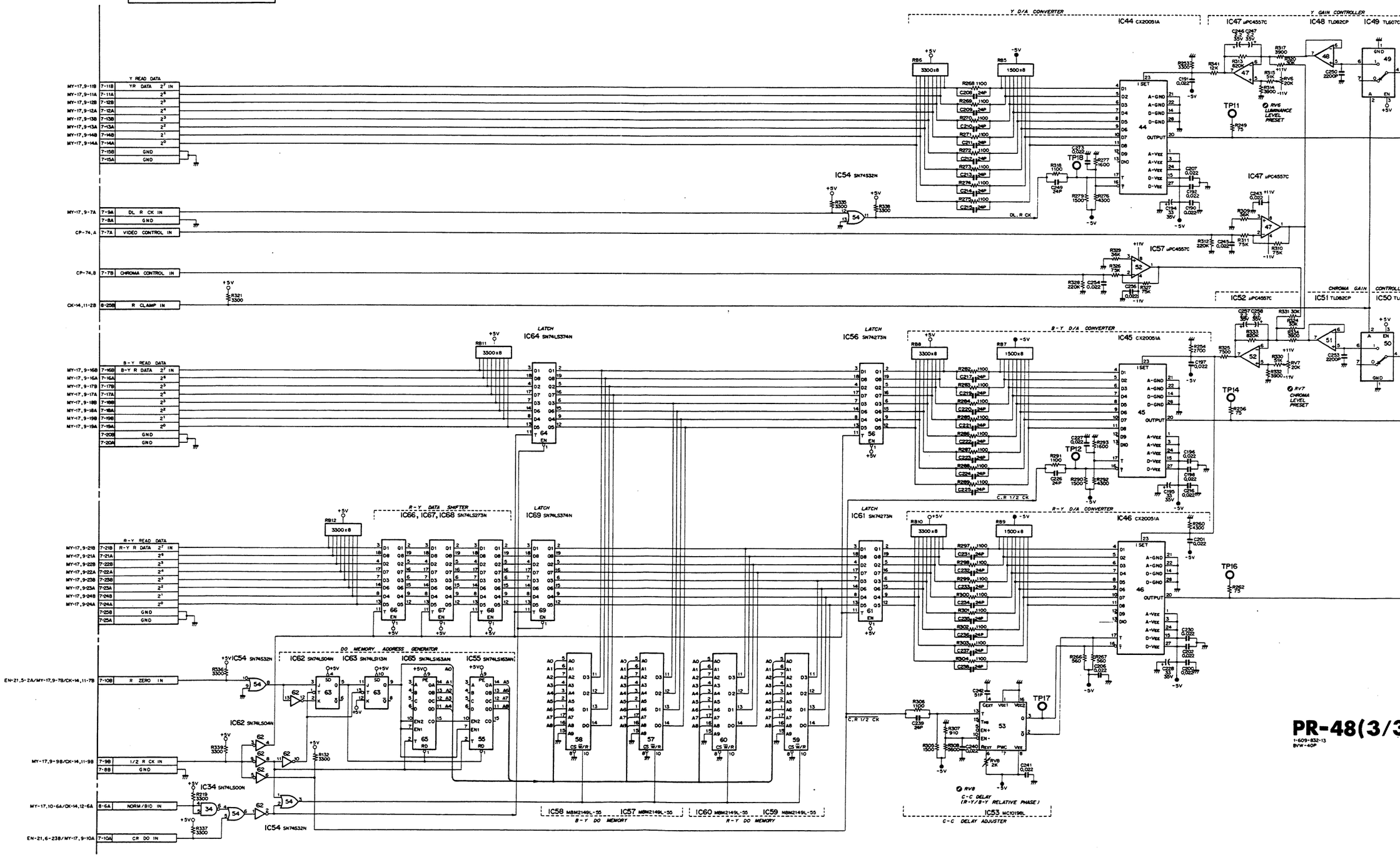


D1	P-3	IC41	G-1	RV1	O-2
D2	P-3	IC42	E-1	RV2	O-3
D3	P-3	IC43	C-1	RV3	M-1
D4	P-3	IC44	C-2	RV4	M-2
D5	P-3	IC45	E-2	RV5	M-2
D6	O-3	IC46	B-2	RV6	F-4
D7	P-4	IC47	F-4	RV7	B-4
D8	L-1	IC48	E-4	RV8	A-4
D9	L-2	IC49	E-4	RV9	G-5
D10	N-3	IC50	D-4	RV10	K-3
D11	N-3	IC51	C-4		
D13	N-3	IC52	B-4	T1	P-4
D14	M-3	IC53	A-3	T2	N-4
D15	M-3	IC54	F-5		
D16	N-4	IC55	E-5	TP1	P-1
D17	N-3	IC56	D-5	TP2	P-3
D18	K-1	IC57	D-5	TP3	P-5
D19	H-1	IC58	C-5	TP4	P-7
D20	I-2	IC59	C-5	TP5	N-1
D21	J-2	IC60	B-5	TP6	M-3
D22	H-2	IC61	A-5	TP7	M-5
D23	K-5	IC62	F-6	TP9	K-3
D24	J-5	IC63	E-6	TP10	F-1
D25	J-5	IC64	D-6	TP11	F-2
D26	I-4	IC65	D-6	TP12	C-3
D27	K-1	IC66	C-6	TP13	D-1
D28	H-1	IC67	C-6	TP14	C-2
		IC68	B-6	TP15	B-1
DL1	L-3	IC69	A-6	TP16	A-2
DL2	P-6	IC501	G-7	TP17	A-2
DL3	M-6			TP18	F-3
DL4	H-6	LPF1	P-1	TP19	G-4
		LPF2	N-2	TP20	J-6
IC1	P-2	LPF3	G-2	TP21	K-3
IC2	O-3	LPF4	E-2	TP22	K-7
IC3	O-4	LPF5	B-2	TP23	L-7
IC4	O-5				
IC5	P-6	Q1	O-1	TPE1	O-1
IC7	O-6	Q2	P-3	TPE2	P-7
IC8	O-6	Q3	P-3	TPE3	H-1
IC9	L-2	Q4	P-3	TPE4	G-6
IC10	N-2	Q5	P-3	TPE5	F-1
IC11	M-3	Q6	P-4	TPE6	B-7
IC12	L-3	Q7	P-4	TPE7	O-2
IC13	L-4	Q8	O-4	TPE8	N-7
IC14	M-5	Q9	P-4	TPE9	F-1
IC15	N-6	Q10	P-4	TPE10	F-7
IC17	M-6	Q11	M-1		
IC18	L-6	Q12	L-2		
IC19	L-2	Q13	N-3		
IC20	K-2	Q14	M-3		
IC21	J-2	Q15	M-3		
IC22	I-2	Q16	M-3		
IC23	I-2	Q17	M-4		
IC24	K-3	Q18	M-4		
IC25	J-3	Q19	M-4		
IC26	I-3	Q20	N-4		
IC27	I-3	Q21	N-4		
IC28	K-4	Q22	K-1		
IC29	K-4	Q23	K-1		
IC30	J-4	Q24	K-1		
IC31	I-4	Q25	J-1		
IC32	I-4	Q26	J-1		
IC33	H-4	Q27	I-1		
IC34	K-5	Q28	F-2		
IC35	K-5	Q29	D-2		
IC36	J-5	Q30	A-2		
IC37	I-5	Q501	J-7		
IC38	I-5				
IC39	H-5				
IC40	G-5				

PR-48 (3/3) PR-48 (3/3)

PR-48 (3/3) (VIDEO TBC)

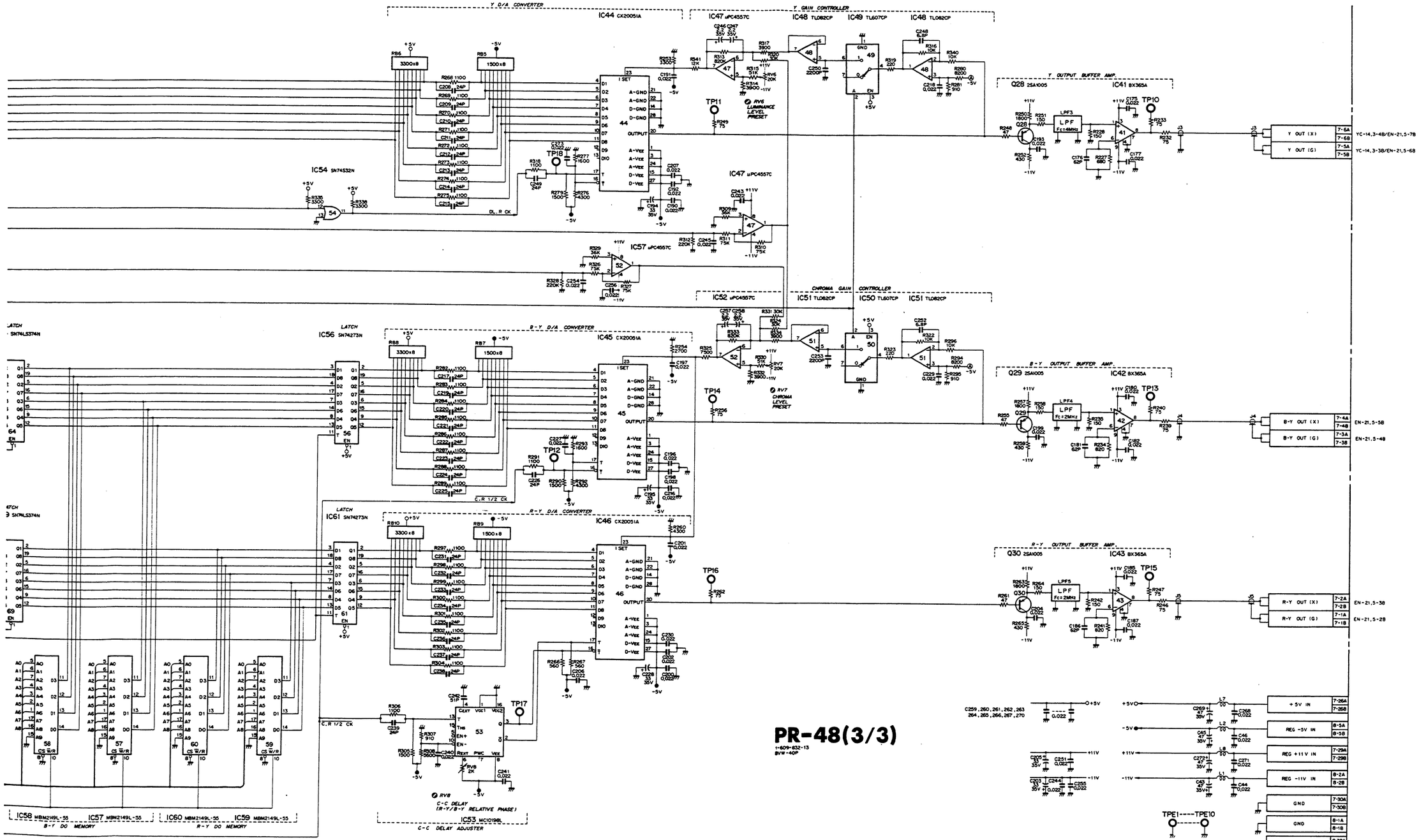
UP TO S/N 11040 (P)
UP TO S/N 10025 (S)



18-119 (a)

18-120 (a)

PR-48(3/3
1-609-832-13
BVW-40P



PR-48(3/3)

1-609-832-13
BVM-40P

18-120 (a)

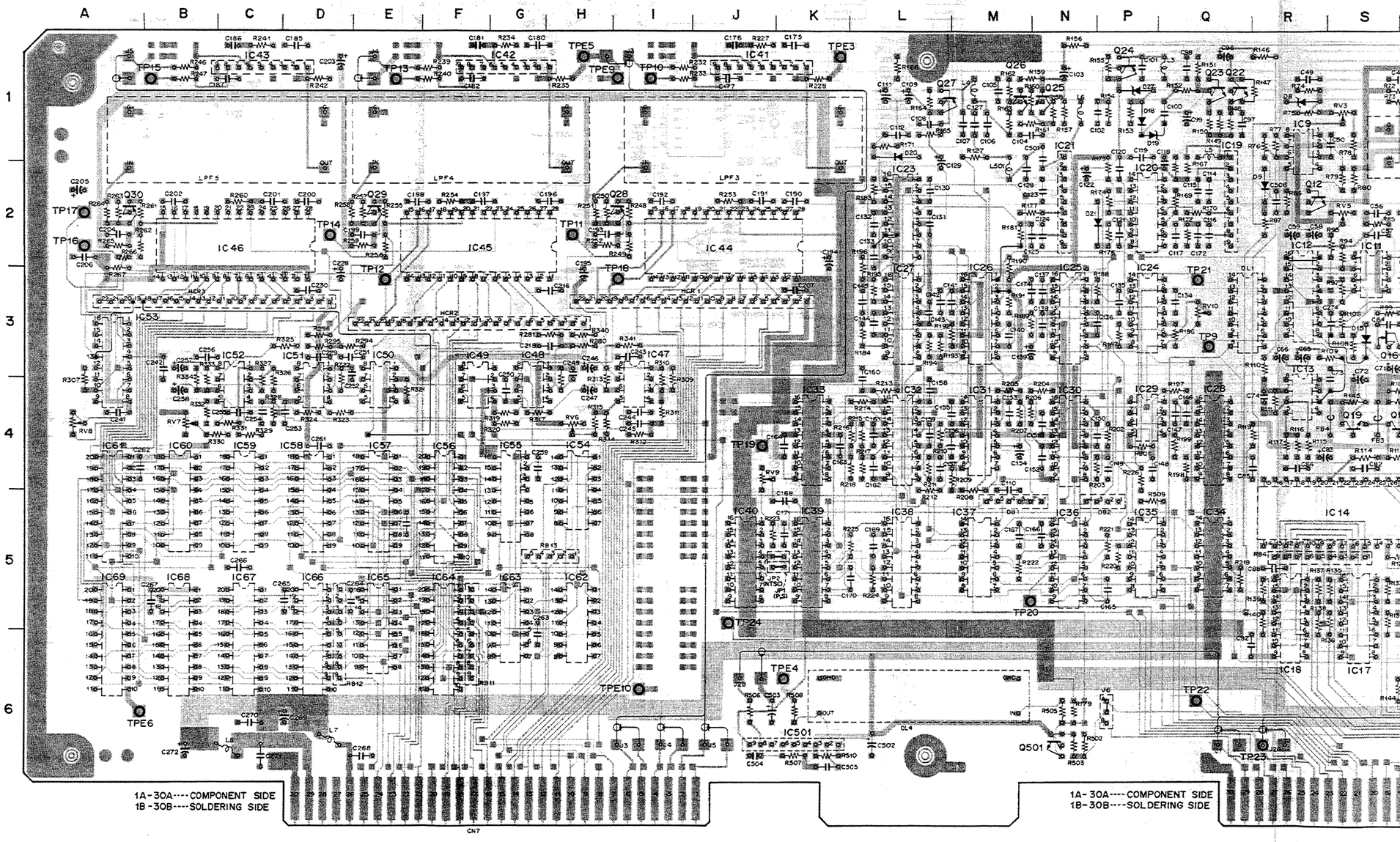
18-121 (a)

PR-48 PR-48

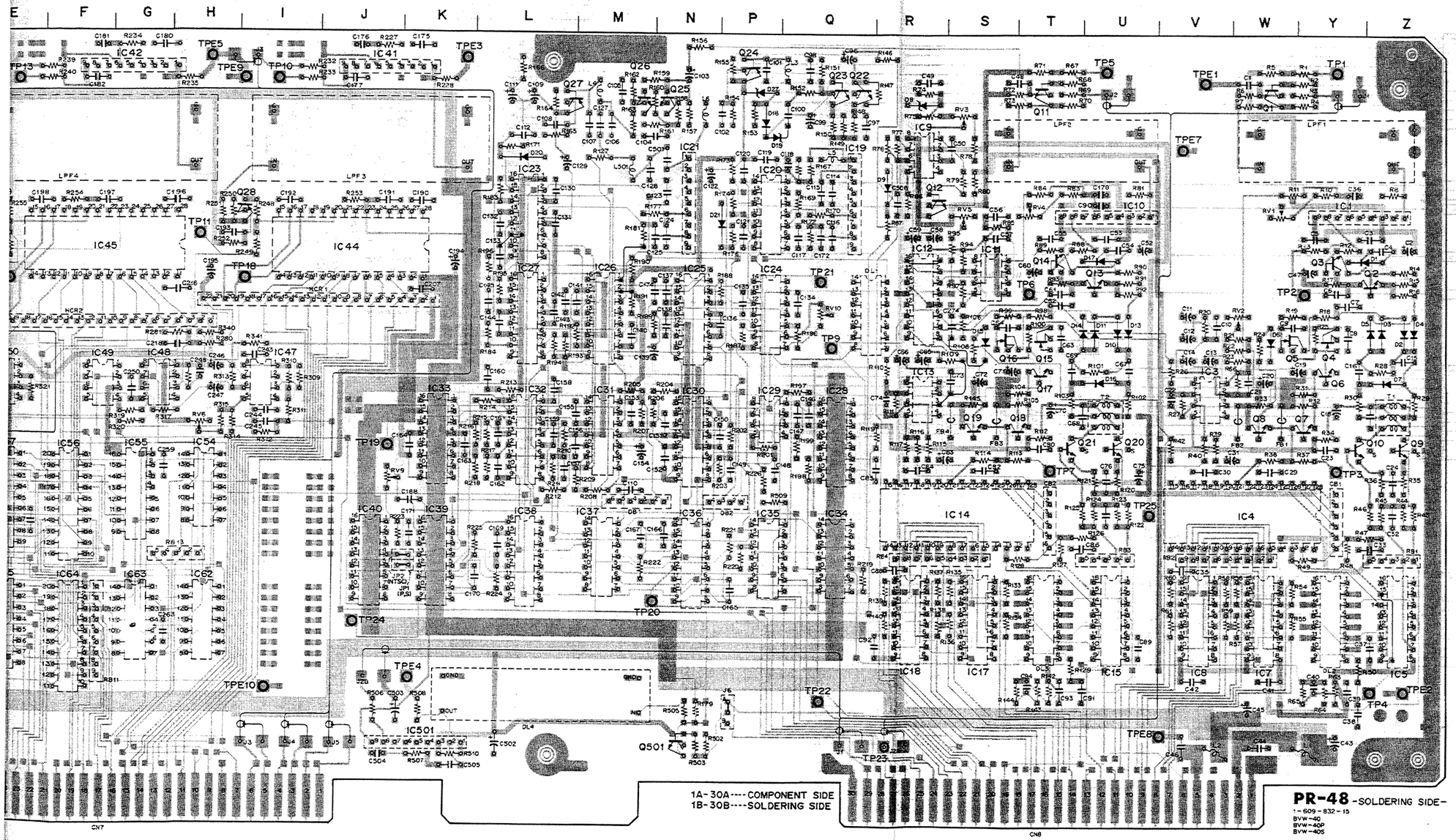
PR-48 (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10026 AND LATER (S)

Ref. No.	Type	Pin No.				
		−11V	−5V	GND	+5V	+11V
IC 1	BX365A	9		4, 7		3
IC 3	TL082CP	4				8
IC 4	CX20052		14, 19, 23	4, 13, 15, 20, 22		
IC 5	HD10105		8		1, 16	
IC 7	HD10125		8	16	9	
IC 8	HD10125		8	16	9	
IC 9	μPC4557C	4				8
IC 10	BX365A	9		4, 7		3
IC 11	TL082CP	4				8
IC 12	HI1-201-5	4		5		13
IC 13	TL082CP	4				8
IC 14	CX20052		4, 19, 23	4, 13, 15, 20, 22		
IC 15	HD10105		8		1, 16	
IC 17	HD10125		8	16	9	
IC 18	HD10125		8	16	9	
IC 19	BX365A	9		4, 7		3
IC 20	μPC319C	6				11
IC 21	BX365A	9		4, 7		3
IC 23	HA1-4905-5	5		9	1	13
IC 24	TL084CN	11				4
IC 25	HI1-201-5	4		5		13
IC 26	SN74LS123N			8	16	
IC 27	HI1-201-5	4		5		13
IC 28	SN74LS221N			8	16	
IC 29	SN75454BP			4	8	
IC 30	HA1-4905-5	5		9	1	13
IC 31	TL084CN	11				4
IC 32	HA1-4905-5	5		9	1	13
IC 33	HI1-201-5	4		5		13
IC 34	SN74LS00N			7	14	
IC 35	SN74LS74AN			7	14	
IC 36	SN74LS221N			8	16	
IC 37	SN74LS20N			7	14	
IC 38	TC4528BP			8	16	
IC 39	SN74LS221N			8	16	
IC 40	TC4022BP			8	16	
IC 41	BX365A	9		4, 7		3
IC 42	BX365A	9		4, 7		3
IC 43	BX365A	8		4, 7		3
IC 44	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28	
IC 45	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28	
IC 46	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28	
IC 47	μPC4557C	4				8
IC 48	TL082CP	4				8
IC 49	TL607CP	5		1		6
IC 50	TL607CP	5		1		8
IC 51	TL082CP	4				8
IC 52	μPC4557C	4				8
IC 53	MC10198L			8	1, 16	
IC 54	SN74S32N			7	14	
IC 55	SN74LS163AN			8	16	
IC 56	SN74273N			10	20	
IC 57	MBM2149L-55			9	18	
IC 58	MBM2149L-55			9	18	
IC 59	MBM2149L-55			9	18	
IC 60	MBM2149L-55			9	18	
IC 61	SN74273N			10	20	
IC 62	SN74LS04N			7	14	
IC 63	SN74LS113AN			7	14	
IC 64	SN74LS374N			10	20	
IC 65	SN74LS163AN			8	16	
IC 66	SN74LS273N			10	20	
IC 67	SN74LS273N			10	20	
IC 68	SN74LS273N			10	20	
IC 69	SN74LS374N			10	20	
IC501	BX365A	9		4, 7		3



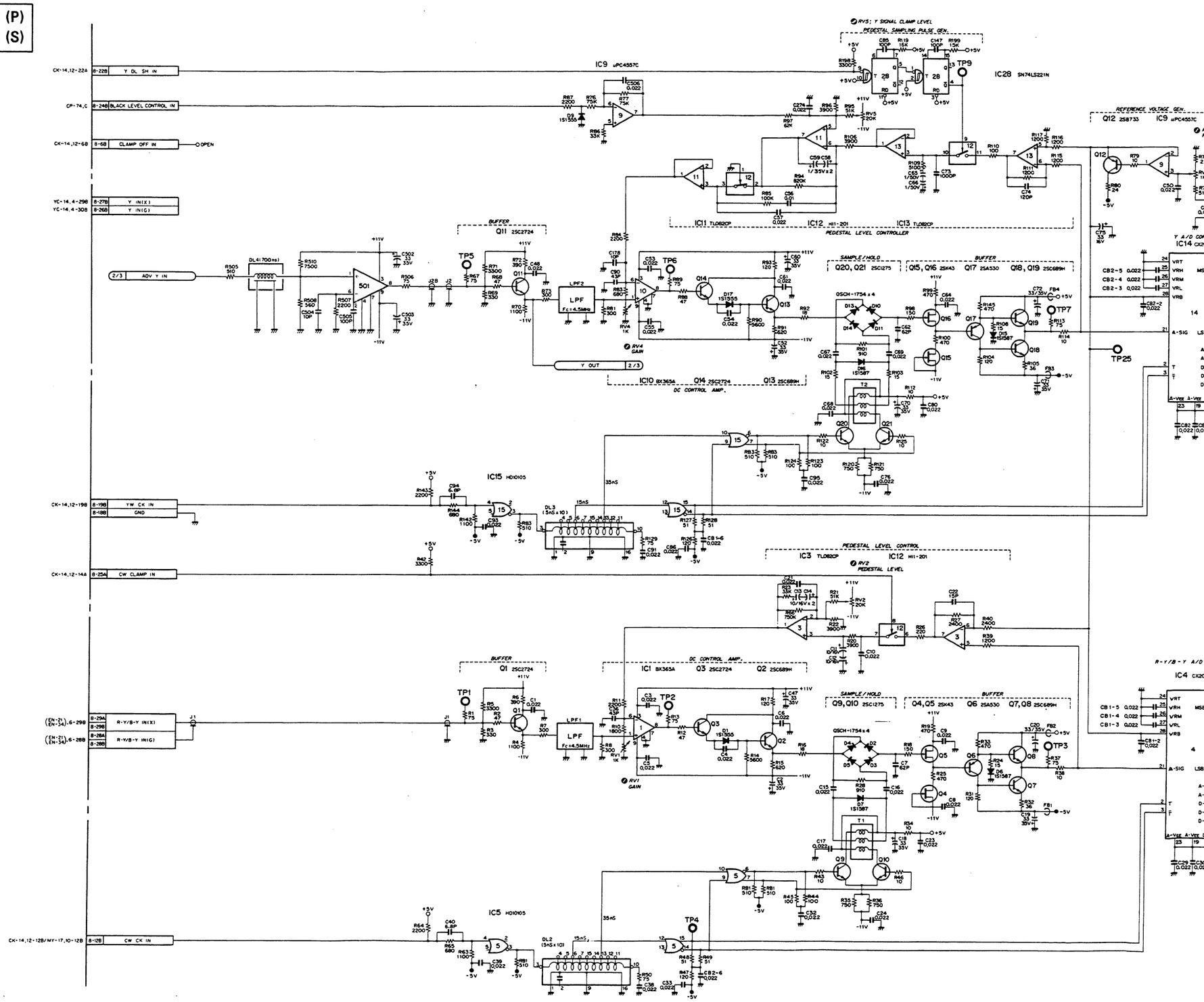
1A-30A----COMPONENT SIDE
1B-30B----SOLDERING SIDE



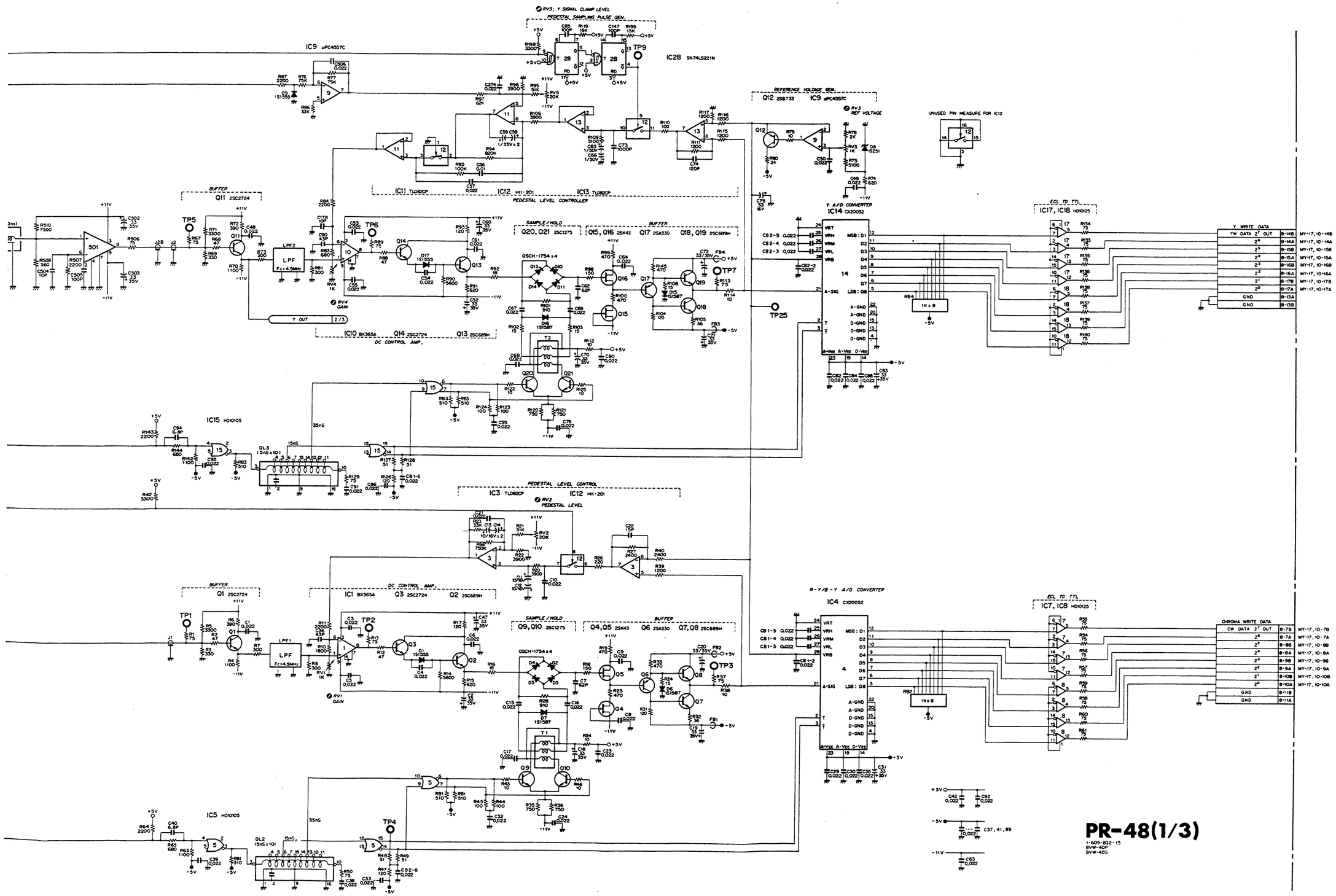
D1	Y - 2	IC49	F - 4	TP1	Y - 1
D2	Z - 3	IC50	E - 4	TP2	Y - 3
D3	Z - 3	IC51	D - 4	TP3	Y - 4
D4	Z - 3	IC52	C - 4	TP4	Z - 6
D5	Z - 3	IC53	A - 3	TP5	U - 1
D6	W - 3	IC54	H - 4	TP6	T - 3
D7	Z - 4	IC55	G - 5	TP7	T - 4
D8	R - 1	IC56	F - 5	TP9	Q - 3
D9	R - 2	IC57	E - 5	TP10	I - 1
D10	U - 3	IC58	D - 5	TP11	H - 2
D11	U - 3	IC59	C - 5	TP12	E - 3
D13	U - 3	IC60	B - 5	TP13	E - 1
D14	U - 3	IC61	A - 5	TP14	D - 2
D15	S - 3	IC62	H - 5	TP15	B - 1
D16	U - 4	IC63	G - 5	TP16	A - 2
D17	U - 2	IC64	F - 6	TP17	A - 2
D18	P - 1	IC65	E - 6	TP18	I - 3
D19	P - 1	IC66	D - 6	TP19	J - 4
D20	L - 1	IC67	C - 6	TP20	M - 5
D21	P - 2	IC68	B - 6	TP21	Q - 3
D27	P - 1	IC69	A - 6	TP22	Q - 6
		IC501	K - 6	TP23	R - 6
DL1	Q - 3			TP24	J - 6
DL2	Y - 5	LPF1	Y - 1	TP25	U - 5
DL3	T - 6	LPF2	T - 1		
DL4	L - 6	LPF3	J - 1	TPE1	V - 1
		LPF4	F - 1	TPE2	Z - 6
HCR1	J - 3	LPF5	C - 1	TPE3	K - 1
HCR2	F - 3			TPE4	K - 6
HCR3	B - 3	Q1	W - 1	TPE5	H - 1
		Q2	Z - 3	TPE6	B - 6
IC1	Z - 2	Q3	Y - 3	TPE7	V - 1
IC3	V - 4	Q4	Y - 3	TPE8	V - 6
IC4	W - 5	Q5	W - 3	TPE9	I - 1
IC5	Z - 5	Q6	Y - 4	TPE10	I - 6
IC7	W - 5	Q7	Y - 4		
IC8	V - 5	Q8	W - 4		
IC9	R - 1	Q9	Z - 4		
IC10	U - 2	Q10	Z - 4		
IC11	S - 3	Q11	T - 1		
IC12	R - 3	Q12	R - 2		
IC13	R - 4	Q13	U - 3		
IC14	S - 5	Q14	T - 3		
IC15	U - 5	Q15	T - 3		
IC17	S - 5	Q16	S - 3		
IC18	R - 5	Q17	T - 4		
IC19	Q - 2	Q18	T - 4		
IC20	P - 2	Q19	S - 4		
IC21	N - 2	Q20	U - 4		
IC22	L - 2	Q21	T - 4		
IC24	P - 3	Q22	Q - 1		
IC25	N - 3	Q23	Q - 1		
IC26	M - 3	Q24	P - 1		
IC27	L - 3	Q25	N - 1		
IC28	Q - 4	Q26	M - 1		
IC29	P - 4	Q27	L - 1		
IC30	N - 4	Q28	I - 2		
IC31	M - 4	Q29	E - 2		
IC32	L - 4	Q30	A - 2		
IC33	K - 4	Q501	N - 6		
IC34	Q - 5				
IC35	P - 5	RV1	W - 2		
IC36	N - 5	RV2	W - 3		
IC37	M - 5	RV3	S - 1		
IC38	L - 5	RV4	T - 2		
IC39	K - 5	RV5	S - 2		
IC40	J - 5	RV6	H - 4		
IC41	J - 1	RV7	B - 4		
IC42	G - 1	RV8	A - 4		
IC43	C - 1	RV9	J - 4		
IC44	J - 2	RV10	Q - 3		
IC45	F - 2				
IC46	C - 2	T1	Z - 4		
IC47	I - 4	T2	U - 4		
IC48	G - 4				

PR-48 (1/3) (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10026 AND LATER (S)



PR-48 (1/3)
PR-48 (1/3)



18-108 (b)

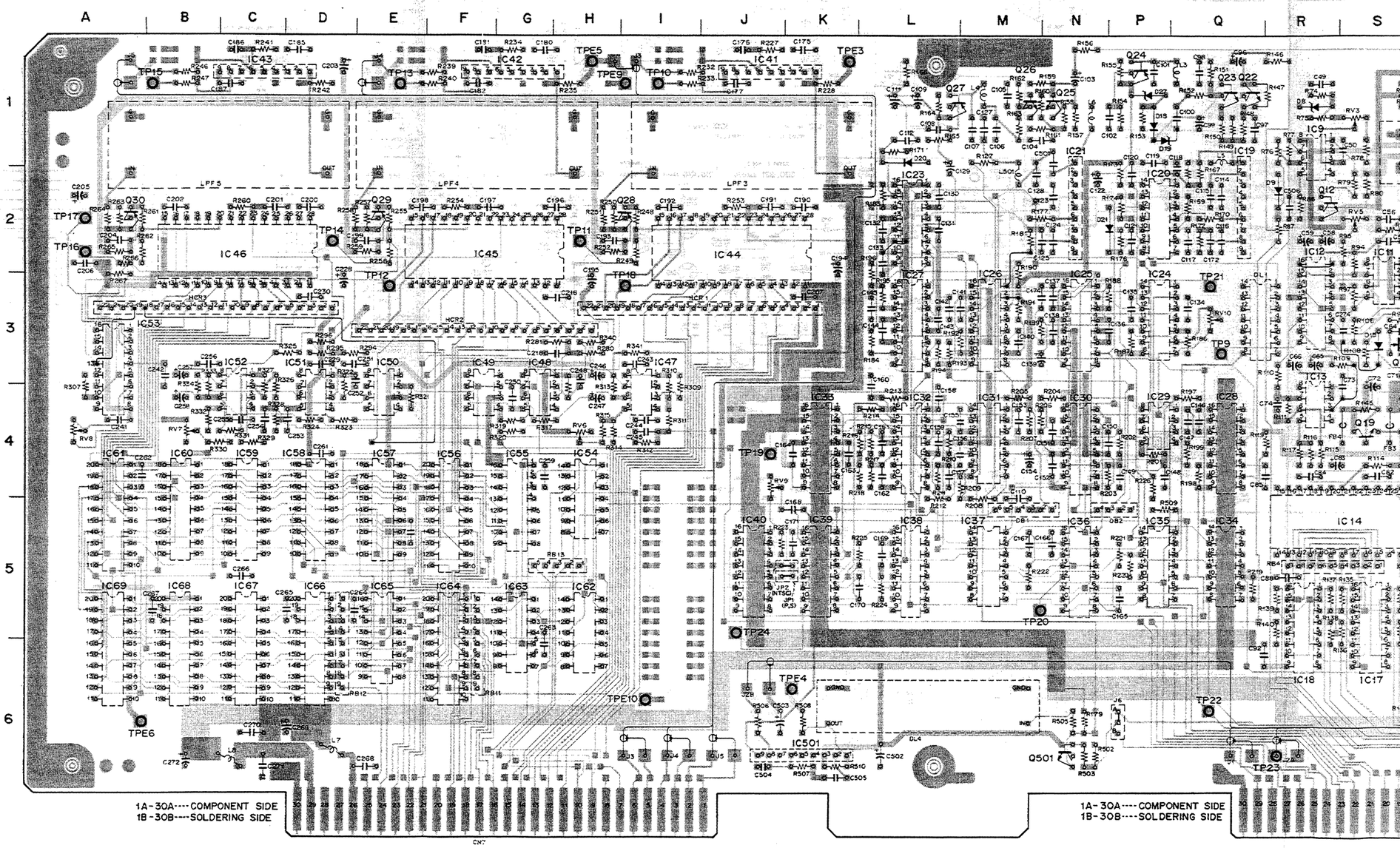
18-109 (b)

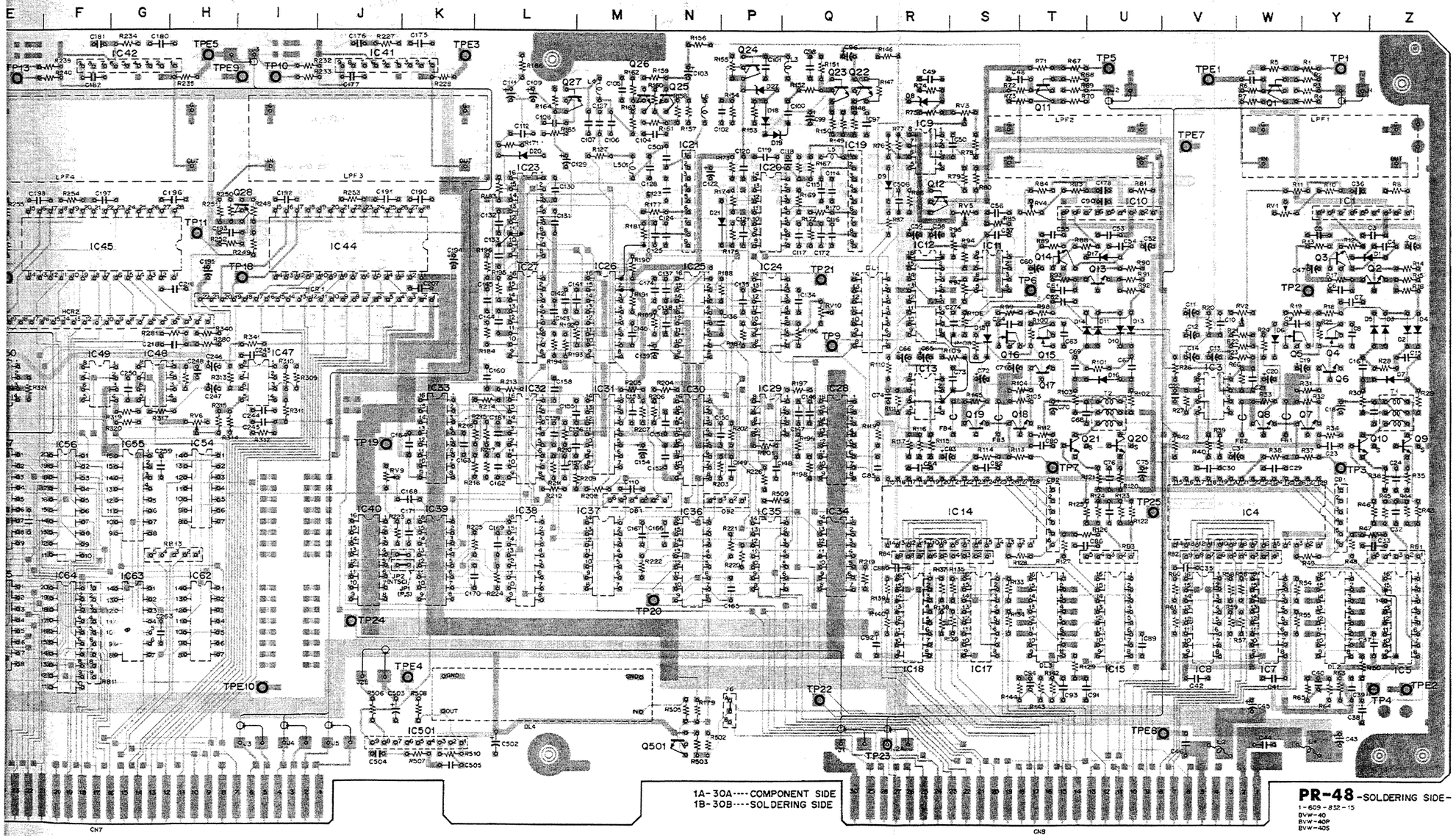
PR-48 PR-48

PR-48 (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10026 AND LATER (S)

Ref. No.	Type	Pin No.				
		−11V	−5V	GND	+5V	+11V
IC 1	BX365A	9		4, 7		3
IC 3	TL082CP	4				8
IC 4	CX20052		14, 19, 23	4, 13, 15, 20, 22		
IC 5	HD10105		8		1, 16	
IC 7	HD10125		8	16	9	
IC 8	HD10125		8	16	9	
IC 9	μPC4557C	4				8
IC 10	BX365A	9		4, 7		3
IC 11	TL082CP	4				8
IC 12	HI-201-5	4		5		13
IC 13	TL082CP	4				8
IC 14	CX20052		4, 19, 23	4, 13, 15, 20, 22		
IC 15	HD10105		8		1, 16	
IC 17	HD10125		8	16	9	
IC 18	HD10125		8	16	9	
IC 19	BX365A	9		4, 7		3
IC 20	μPC319C	6				11
IC 21	BX365A	9		4, 7		3
IC 23	HA1-4905-5	5		9	1	13
IC 24	TL084CN	11				4
IC 25	HI-201-5	4		5		13
IC 26	SN74LS123N			8	16	
IC 27	HI-201-5	4		5		13
IC 28	SN74LS221N			8	16	
IC 29	SN75454BP			4	8	
IC 30	HA1-4905-5	5		9	1	13
IC 31	TL084CN	11				4
IC 32	HA1-4905-5	5		9	1	13
IC 33	HI-201-5	4		5		13
IC 34	SN74LS00N			7	14	
IC 35	SN74LS74AN			7	14	
IC 36	SN74LS221N			8	16	
IC 37	SN74LS20N			7	14	
IC 38	TC4528BP			8	16	
IC 39	SN74LS221N			8	16	
IC 40	TC4022BP			8	16	
IC 41	BX365A	9		4, 7		3
IC 42	BX365A	9		4, 7		3
IC 43	BX365A	8		4, 7		3
IC 44	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28	
IC 45	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28	
IC 46	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28	
IC 47	μPC4557C	4				8
IC 48	TL082CP	4				8
IC 49	TL607CP	5		1		8
IC 50	TL607CP	5		1		8
IC 51	TL082CP	4				8
IC 52	μPC4557C	4				8
IC 53	MC10198L			8	1, 16	
IC 54	SN74S32N			7	14	
IC 55	SN74LS163AN			8	16	
IC 56	SN74276N			10	20	
IC 57	MB M2149L-55			9	18	
IC 58	MB M2149L-55			9	18	
IC 59	MB M2149L-55			9	18	
IC 60	MB M2149L-55			9	18	
IC 61	SN74276N			10	20	
IC 62	SN74LS04N			7	14	
IC 63	SN74LS113AN			7	14	
IC 64	SN74LS374N			10	20	
IC 65	SN74LS163AN			8	16	
IC 66	SN74LS273N			10	20	
IC 67	SN74LS273N			10	20	
IC 68	SN74LS273N			10	20	
IC 69	SN74LS374N			10	20	
IC501	BX365A	9		4, 7		3





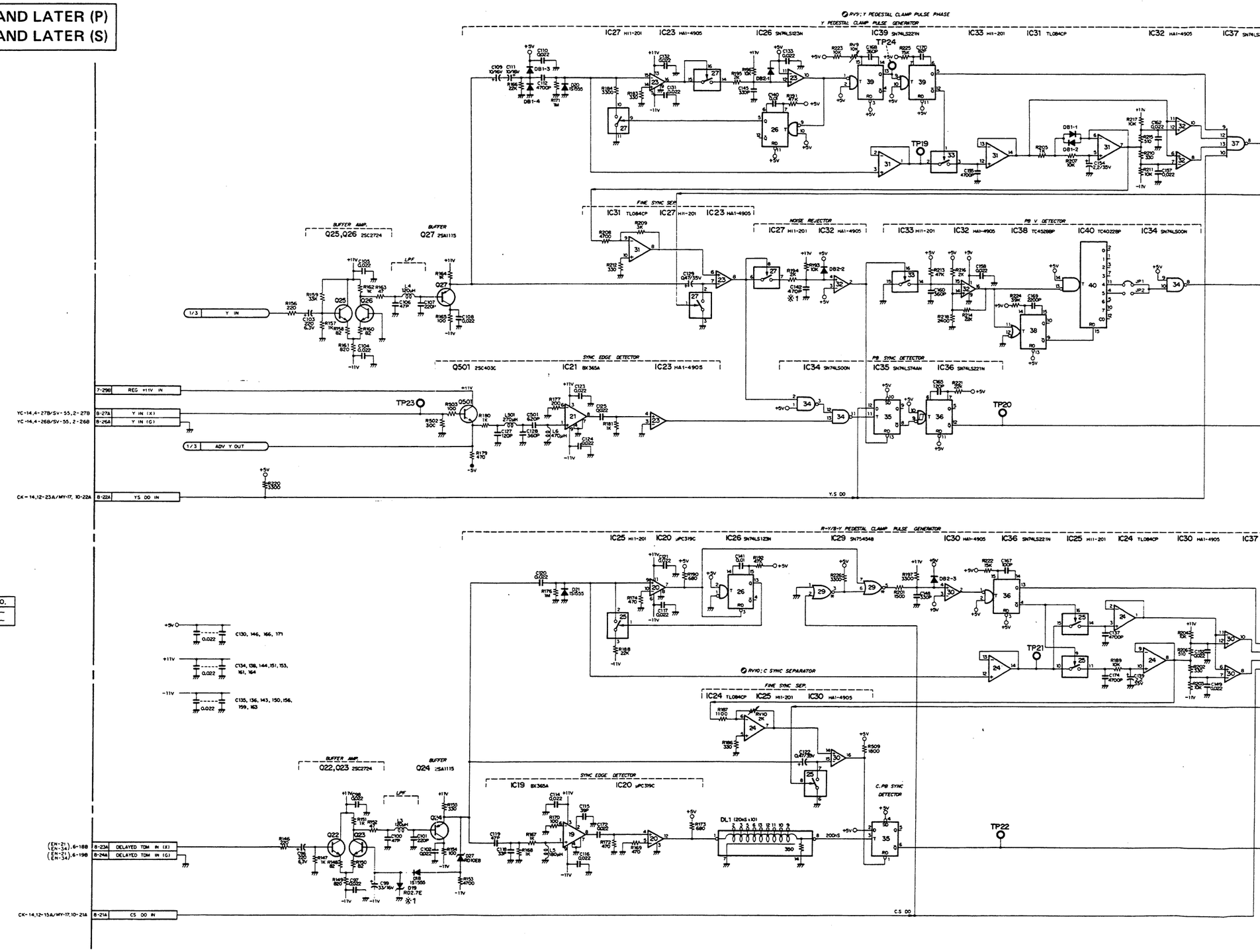
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D2	Z - 3	IC50	E - 4	TP2	Y - 3
D3	Z - 3	IC51	D - 4	TP3	Y - 4
D4	Z - 3	IC52	C - 4	TP4	Z - 6
D5	Z - 3	IC53	A - 3	TP5	U - 1
D6	W - 3	IC54	H - 4	TP6	T - 3
D7	Z - 4	IC55	G - 5	TP7	T - 4
D8	R - 1	IC56	F - 5	TP9	Q - 3
D9	R - 2	IC57	E - 5	TP10	I - 1
D10	U - 3	IC58	D - 5	TP11	H - 2
D11	U - 3	IC59	C - 5	TP12	E - 3
D13	U - 3	IC60	B - 5	TP13	E - 1
D14	U - 3	IC61	A - 5	TP14	D - 2
D15	S - 3	IC62	H - 5	TP15	B - 1
D16	U - 4	IC63	G - 5	TP16	A - 3
D17	U - 2	IC64	F - 6	TP17	A - 2
D18	P - 1	IC65	E - 6	TP18	I - 3
D19	P - 1	IC66	D - 6	TP19	J - 1
D20	L - 1	IC67	C - 6	TP20	M - 5
D21	P - 2	IC68	B - 6	TP21	Q - 3
D27	P - 1	IC69	A - 6	TP22	Q - 6
		IC501	K - 6	TP23	R - 6
DL1	Q - 3			TP24	J - 6
DL2	T - 5	LPF1	Y - 1	TP25	U - 5
DL3	T - 5	LPF2	T - 1		
DL4	L - 6	LPF3	J - 1	TPE1	V - 1
		LPF4	F - 1	TPE2	Z - 6
HCR1	J - 3	LPF5	C - 1	TPE3	K - 1
HCR2	F - 3			TPE4	K - 6
HCR3	B - 3	Q1	W - 1	TPE5	H - 1
		Q2	Z - 3	TPE6	B - 6
IC1	Z - 2	Q3	Y - 3	TPE7	V - 1
IC2	V - 4	Q4	Y - 3	TPE8	V - 6
IC4	W - 5	Q5	W - 3	TPE9	I - 1
IC5	Z - 5	Q6	Y - 3	TPE10	I - 6
IC7	W - 5	Q7	Y - 4		
IC8	V - 5	Q8	W - 4		
IC9	R - 1	Q9	Z - 4		
IC10	U - 2	Q10	Z - 4		
IC11	S - 3	Q11	T - 1		
IC12	R - 3	Q12	R - 2		
IC13	R - 4	Q13	U - 3		
IC14	S - 5	Q14	T - 3		
IC15	U - 5	Q15	T - 3		
IC17	S - 5	Q16	S - 3		
IC18	R - 5	Q17	T - 4		
IC19	Q - 2	Q18	T - 4		
IC20	P - 2	Q19	S - 4		
IC21	N - 2	Q20	U - 4		
IC23	L - 2	Q21	T - 4		
IC24	P - 3	Q22	Q - 1		
IC25	N - 3	Q23	Q - 1		
IC26	M - 3	Q24	P - 1		
IC27	L - 3	Q25	N - 1		
IC28	Q - 4	Q26	M - 1		
IC29	P - 4	Q27	L - 1		
IC30	N - 4	Q28	I - 2		
IC31	M - 4	Q29	E - 2		
IC32	L - 4	Q30	A - 2		
IC33	K - 4	Q501	N - 6		
IC34	Q - 5				
IC35	P - 5	RV1	W - 2		
IC36	N - 5	RV2	W - 3		
IC37	M - 5	RV3	S - 1		
IC38	L - 5	RV4	T - 2		
IC39	K - 5	RV5	S - 2		
IC40	J - 5	RV6	H - 4		
IC41	J - 1	RV7	B - 4		
IC42	G - 1	RV8	A - 4		
IC43	C - 1	RV9	J - 4		
IC44	J - 2	RV10	Q - 3		
IC45	F - 2				
IC46	C - 2	T1	Z - 4		
IC47	I - 4	T2	U - 4		
IC48	G - 4				

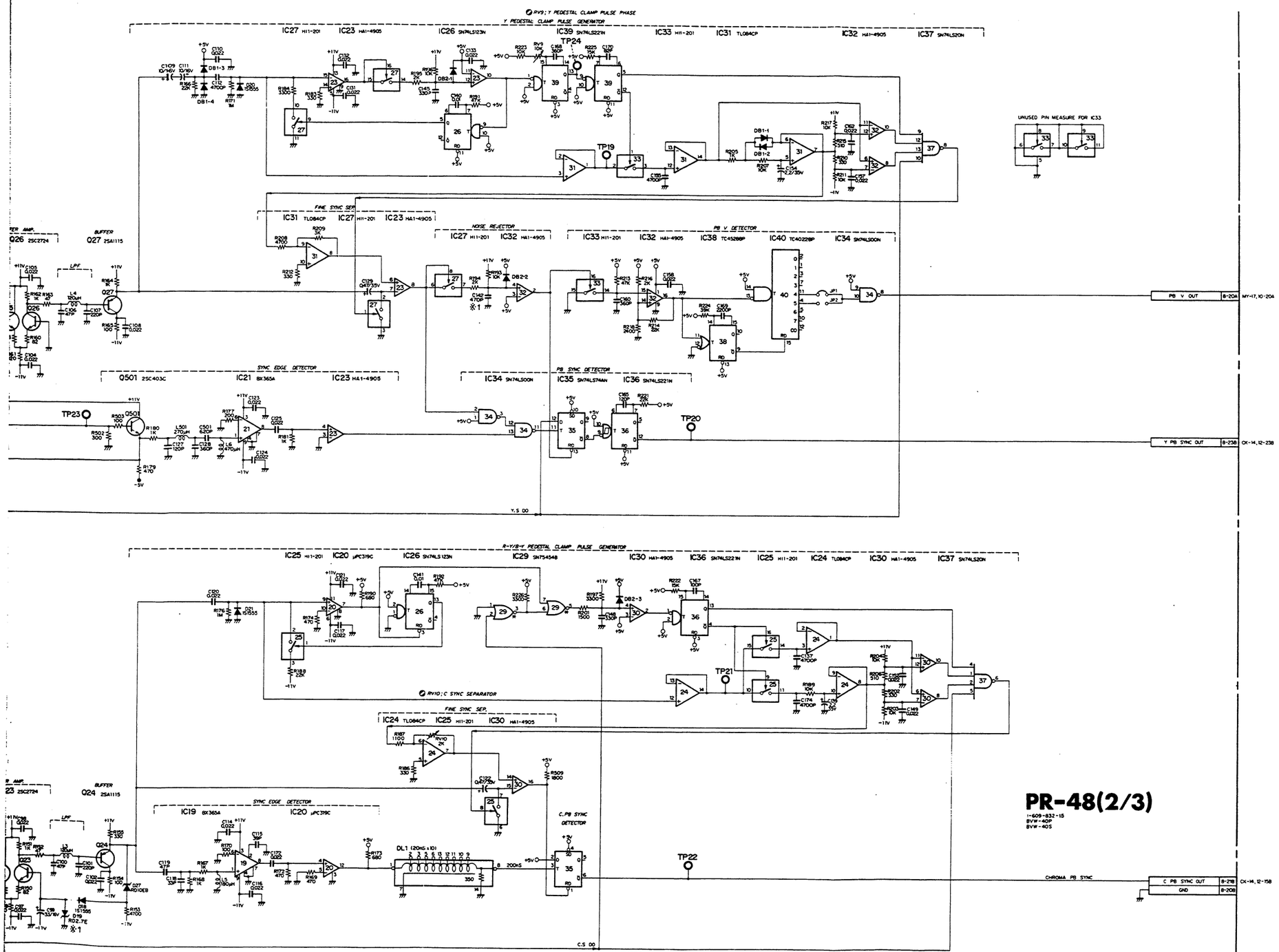
PR-48 (2/3) (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10026 AND LATER (S)

NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	C142 330P → 470P	P: 11131 ~
	D19 RD2.7E ADDED	S: 10046 ~





PR-48(2/3)

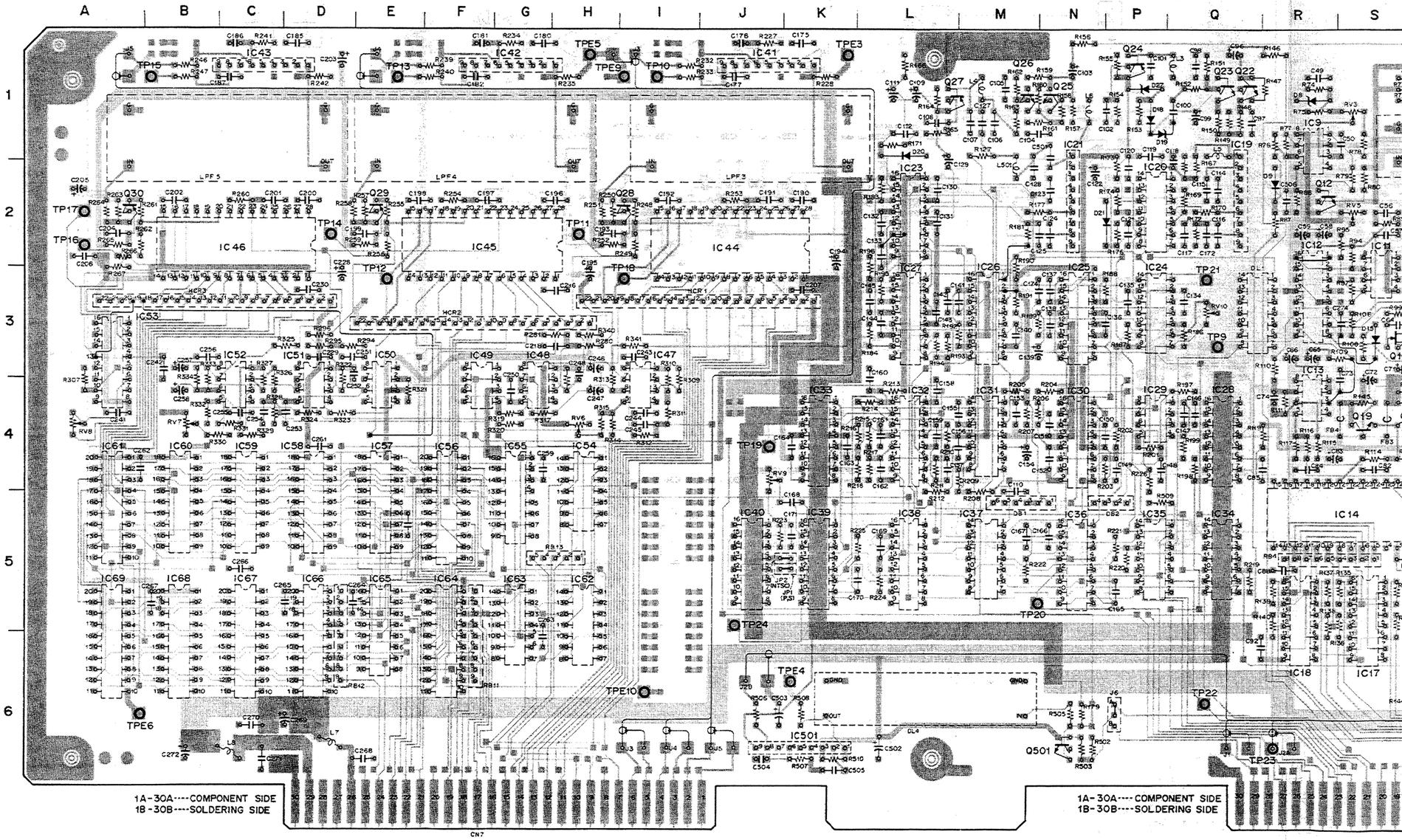
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BVW-40P
BVW-40S

PR-48 PR-48

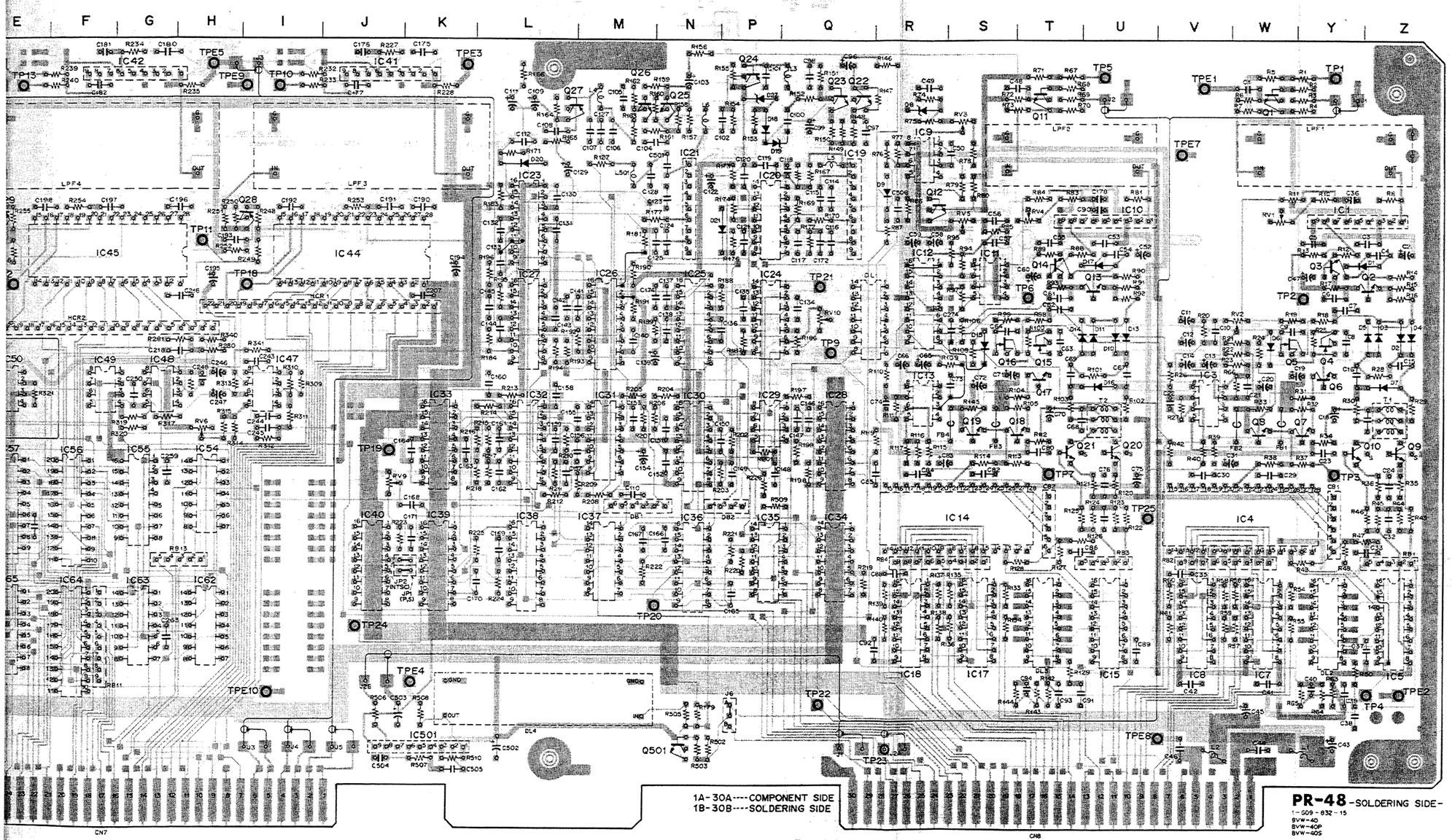
PR-48 (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10026 AND LATER (S)

Ref. No.	Type	Pin No.				
		−11V	−5V	GND	+5V	+11V
IC 1	BX365A	9		4, 7		3
IC 3	TL082CP	4				8
IC 4	CX20052		14, 19, 23	4, 13, 15, 20, 22		
IC 5	HD10105		8		1, 16	
IC 7	HD10125		8	16	9	
IC 8	HD10125		8	16	9	
IC 9	μPC1557C	4				8
IC 10	BX365A	9		4, 7		3
IC 11	TL082CP	4				8
IC 12	HI1-201-5	4		5		13
IC 13	TL082CP	4				8
IC 14	CX20052		4, 19, 23	4, 13, 15, 20, 22		
IC 15	HD10105		8		1, 16	
IC 17	HD10125		8	16	9	
IC 18	HD10125		8	16	9	
IC 19	BX365A	9		4, 7		3
IC 20	μPC319C	6				11
IC 21	BX365A	9		4, 7		3
IC 23	HA1-4905-5	5		9	1	13
IC 24	TL084CN	11				4
IC 25	HI1-201-5	4		5		13
IC 26	SN74LS123N			8	16	
IC 27	HI1-201-5	4		5		13
IC 28	SN74LS221N			8	16	
IC 29	SN75454BP			4	8	
IC 30	HA1-4905-5	5		9	1	13
IC 31	TL084CN	11				4
IC 32	HA1-4905-5	5		9	1	13
IC 33	HI1-201-5	4		5		13
IC 34	SN74LS00N			7	14	
IC 35	SN74LS74AN			7	14	
IC 36	SN74LS221N			8	16	
IC 37	SN74LS20N			7	14	
IC 38	TC4528BP			8	16	
IC 39	SN74LS221N			8	16	
IC 40	TC4022BP			8	16	
IC 41	BX365A	9		4, 7		3
IC 42	BX365A	9		4, 7		3
IC 43	BX365A	8		4, 7		3
IC 44	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28	
IC 45	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28	
IC 46	CX20051A			1, 3, 15, 24, 27	14, 21, 22, 28	
IC 47	μPC4557C	4				8
IC 48	TL082CP	4				8
IC 49	TL607CP	5		1		8
IC 50	TL607CP	5		1		8
IC 51	TL082CP	4				8
IC 52	μPC4557C	4				8
IC 53	MC10198L			8	1, 16	
IC 54	SN74S32N			7	14	
IC 55	SN74LS163AN			8	16	
IC 56	SN74273N			10	20	
IC 57	MBM2149L-55			9	18	
IC 58	MBM2149L-55			9	18	
IC 59	MBM2149L-55			9	18	
IC 60	MBM2149L-55			9	18	
IC 61	SN74273N			10	20	
IC 62	SN74LS04N			7	14	
IC 63	SN74LS113AN			7	14	
IC 64	SN74LS374N			10	20	
IC 65	SN74LS163AN			8	16	
IC 66	SN74LS273N			10	20	
IC 67	SN74LS273N			10	20	
IC 68	SN74LS273N			10	20	
IC 69	SN74LS374N			10	20	
IC501	BX365A	9		4, 7		3



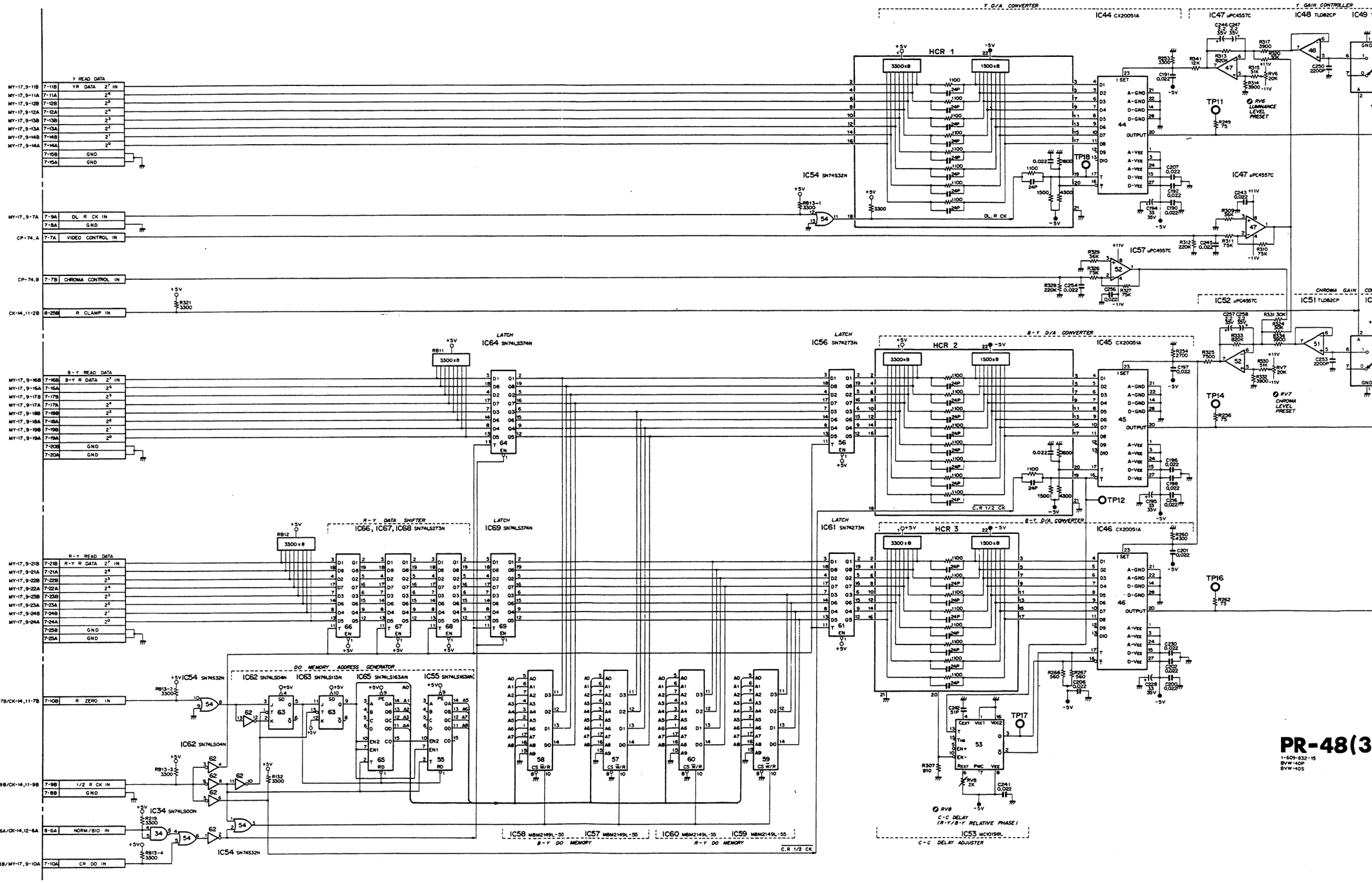
1A-30A----COMPONENT SIDE
1B-30B----SOLDERING SIDE

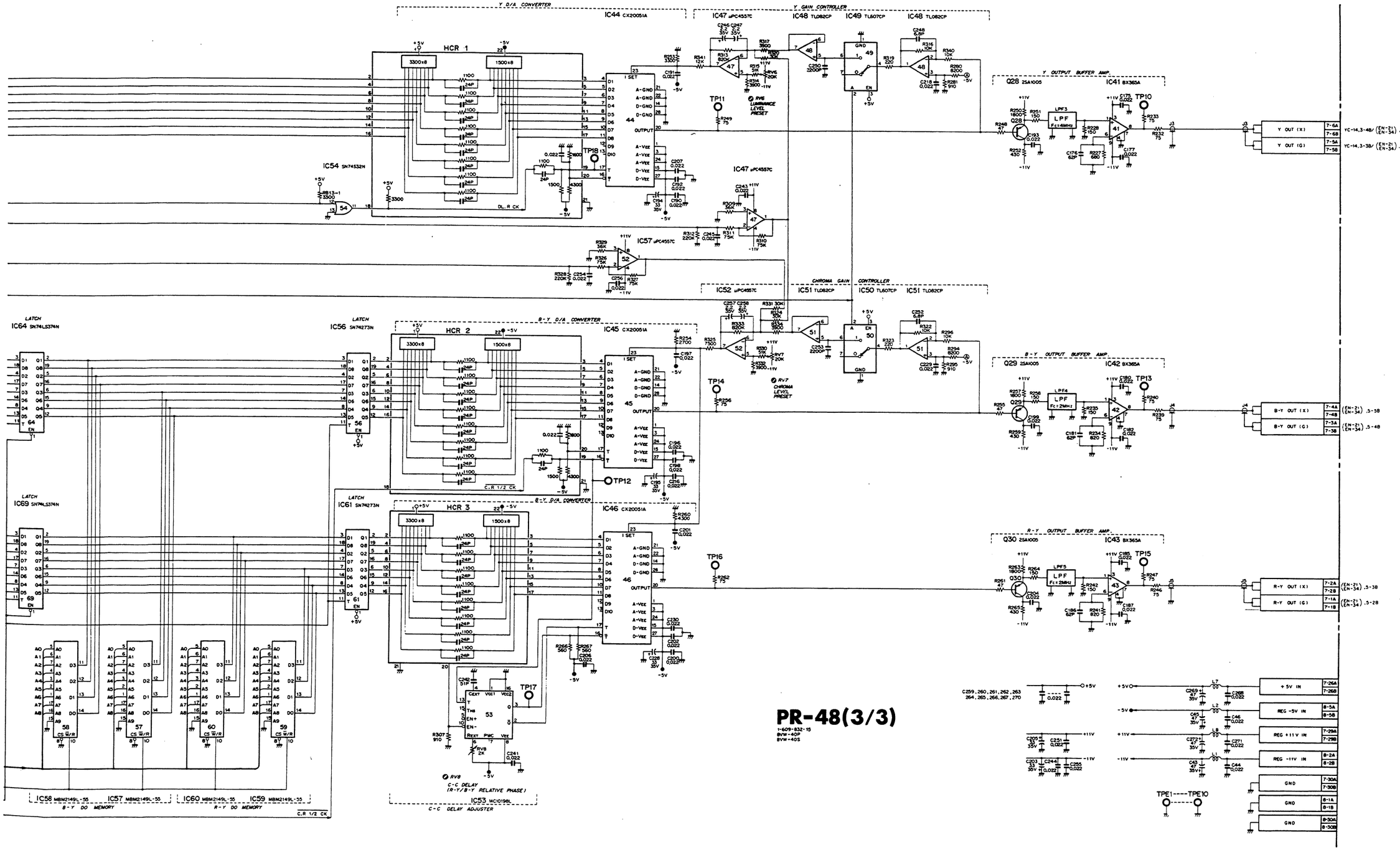


D1	Y - 2	IC49	F - 4	TP1	Y - 1		
D2	Z - 3	IC50	E - 4	TP2	Y - 3		
D3	Z - 3	IC51	D - 4	TP3	Y - 4		
D4	Z - 3	IC52	C - 4	TP4	Z - 6		
D5	Z - 3	IC53	A - 3	TP5	U - 1		
D6	W - 3	IC54	H - 4	TP6	T - 3		
D7	Z - 4	IC55	G - 5	TP7	T - 4		
D8	R - 1	IC56	F - 5	TP9	Q - 3		
D9	R - 2	IC57	E - 5	TP10	I - 1		
D10	U - 3	IC58	D - 5	TP11	H - 2		
D11	U - 3	IC59	C - 5	TP12	E - 3		
D13	U - 3	IC60	B - 5	TP13	E - 1		
D14	U - 3	IC61	A - 5	TP14	D - 2		
D15	S - 3	IC62	H - 5	TP15	B - 1		
D16	U - 4	IC63	G - 5	TP16	A - 2		
D17	U - 2	IC64	F - 6	TP17	A - 2		
D18	P - 1	IC65	E - 6	TP18	I - 3		
D19	P - 1	IC66	D - 6	TP19	J - 1		
D20	L - 1	IC67	C - 6	TP20	M - 5		
D21	P - 2	IC68	B - 6	TP21	Q - 3		
D27	P - 1	IC69	A - 6	TP22	Q - 6		
		IC501	K - 6	TP23	R - 6		
DL1	Q - 3			TP24	J - 6		
DL2	Y - 5	LPF1	Y - 1	TP25	U - 5		
DL3	T - 6	LPF2	T - 1				
DL4	L - 6	LPF3	J - 1	TPE1	V - 1		
		LPF4	F - 1	TPE2	Z - 6		
HCR1	J - 3	LPF5	C - 1	TPE3	K - 1		
HCR2	F - 3			TPE4	K - 6		
HCR3	B - 3	Q1	W - 1	TPE5	H - 1		
		Q2	Z - 3	TPE6	B - 6		
IC1	Z - 2	Q3	Y - 3	TPE7	V - 1		
IC3	V - 4	Q4	Y - 3	TPE8	V - 6		
IC4	W - 5	Q5	W - 3	TPE9	I - 1		
IC5	Z - 5	Q6	Y - 3	TPE10	I - 6		
IC7	W - 5	Q7	Y - 4				
IC8	V - 5	Q8	W - 4				
IC9	R - 1	Q9	Z - 4				
IC10	U - 2	Q10	Z - 4				
IC11	S - 3	Q11	T - 1				
IC12	R - 3	Q12	R - 2				
IC13	R - 4	Q13	U - 3				
IC14	S - 5	Q14	T - 3				
IC15	U - 5	Q15	T - 3				
IC17	S - 5	Q16	S - 3				
IC18	R - 5	Q17	T - 4				
IC19	Q - 2	Q18	T - 4				
IC20	P - 2	Q19	S - 4				
IC21	N - 2	Q20	U - 4				
IC23	L - 2	Q21	T - 4				
IC24	P - 3	Q22	Q - 1				
IC26	M - 3	Q23	Q - 1				
IC27	L - 3	Q24	N - 1				
IC28	Q - 4	Q25	M - 1				
IC29	P - 4	Q26	L - 1				
IC30	N - 4	Q27	I - 2				
IC31	M - 4	Q28	E - 2				
IC32	L - 4	Q30	A - 2				
IC33	K - 4	Q501	N - 6				
IC34	Q - 5						
IC35	P - 5	RV1	W - 2				
IC36	N - 5	RV2	W - 3				
IC37	M - 5	RV3	S - 1				
IC38	L - 5	RV4	T - 2				
IC39	K - 5	RV5	S - 2				
IC40	J - 5	RV6	H - 4				
IC41	J - 1	RV7	B - 4				
IC42	C - 1	RV8	A - 4				
IC43	C - 1	RV9	J - 4				
IC44	J - 2	RV10	Q - 3				
IC45	F - 2						
IC46	C - 2	T1	Z - 4				
IC47	I - 4	T2	U - 4				
IC48	G - 4						

PR-48 (3/3) (VIDEO TBC)

S/N 11041 AND LATER (P)
S/N 10026 AND LATER (S)



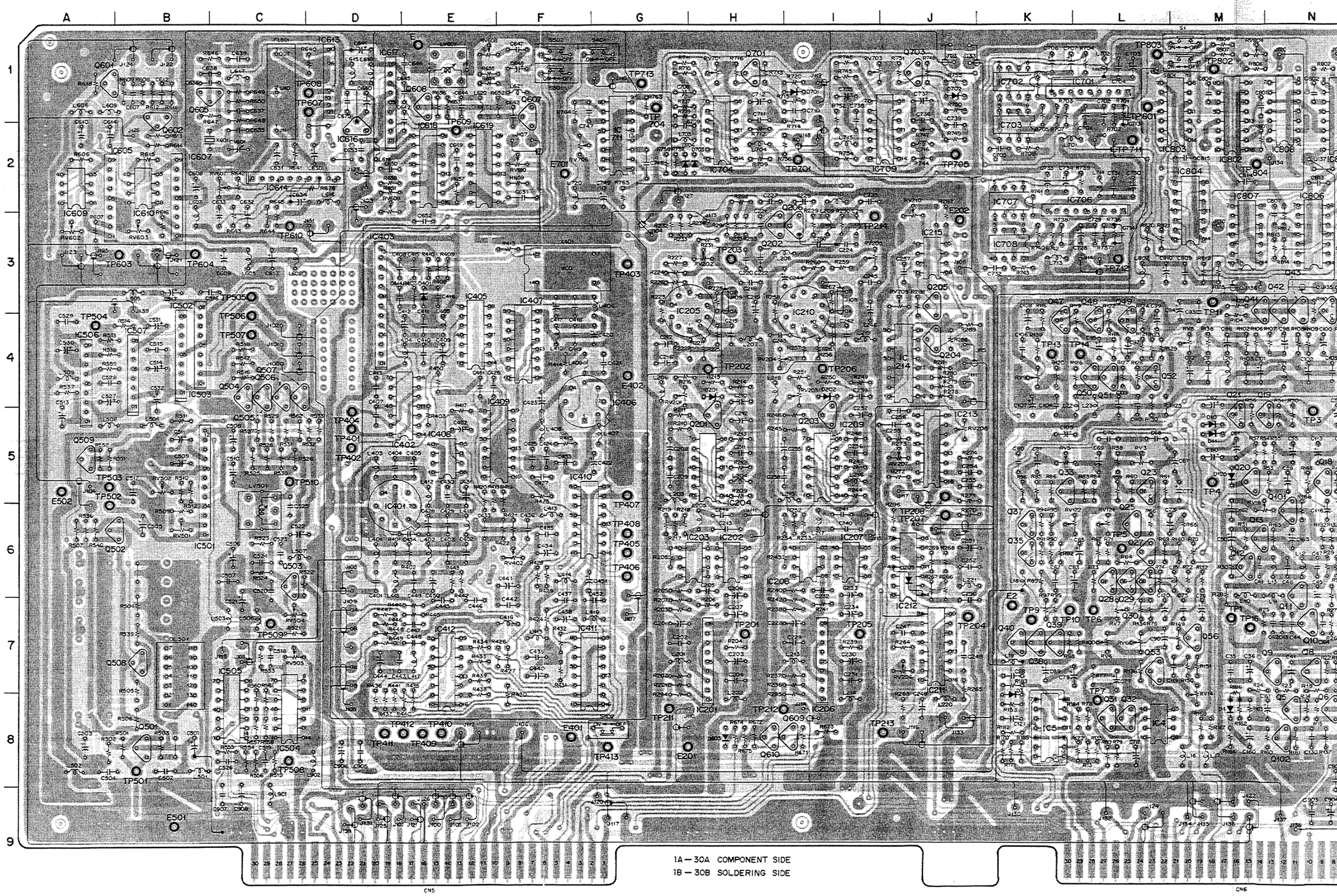


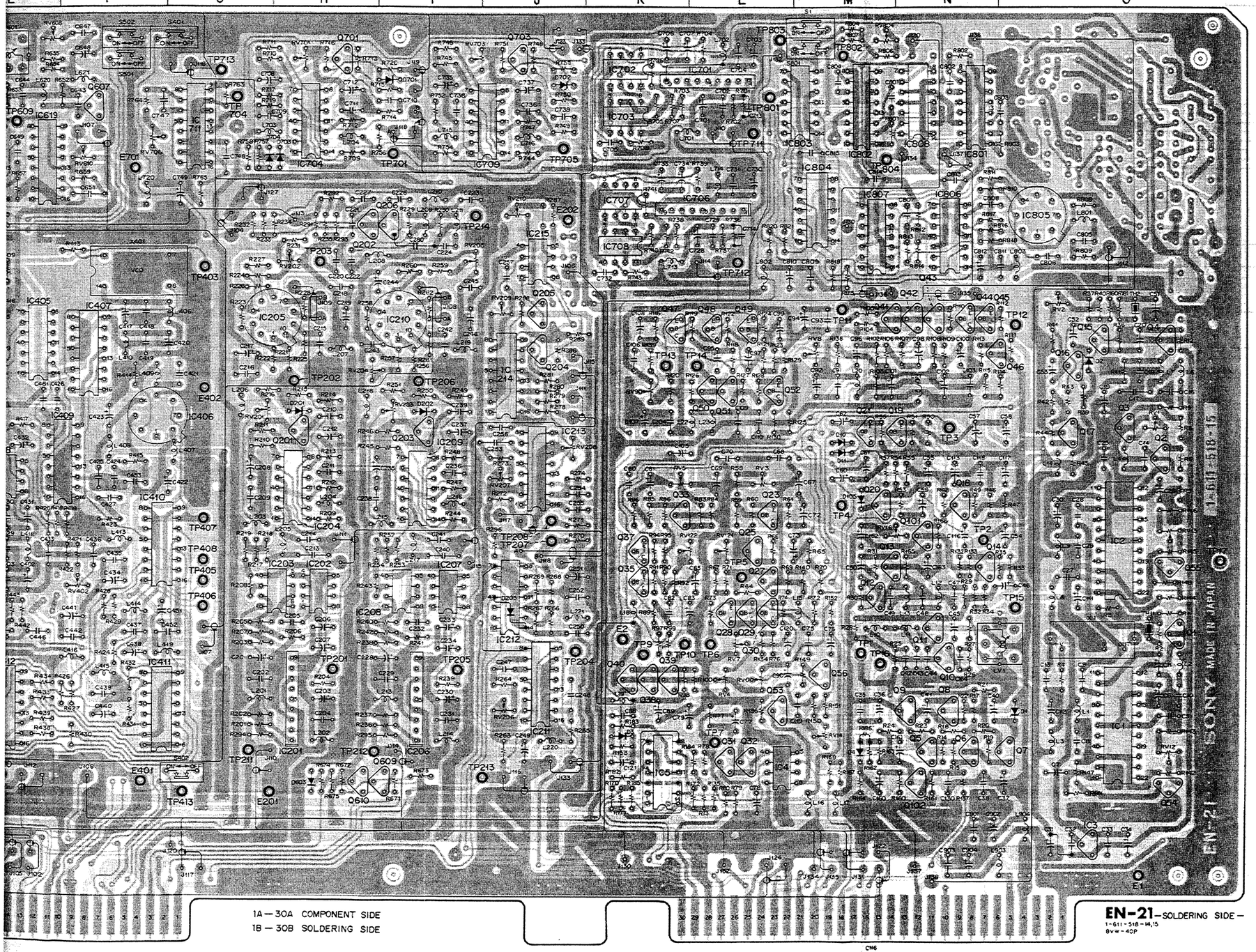
PR-48(3/3)

1-609-832-15
BVW-40P
BVW-40S

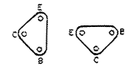
EN-21 EN-21

EN-21 (VIDEO ENCODER)

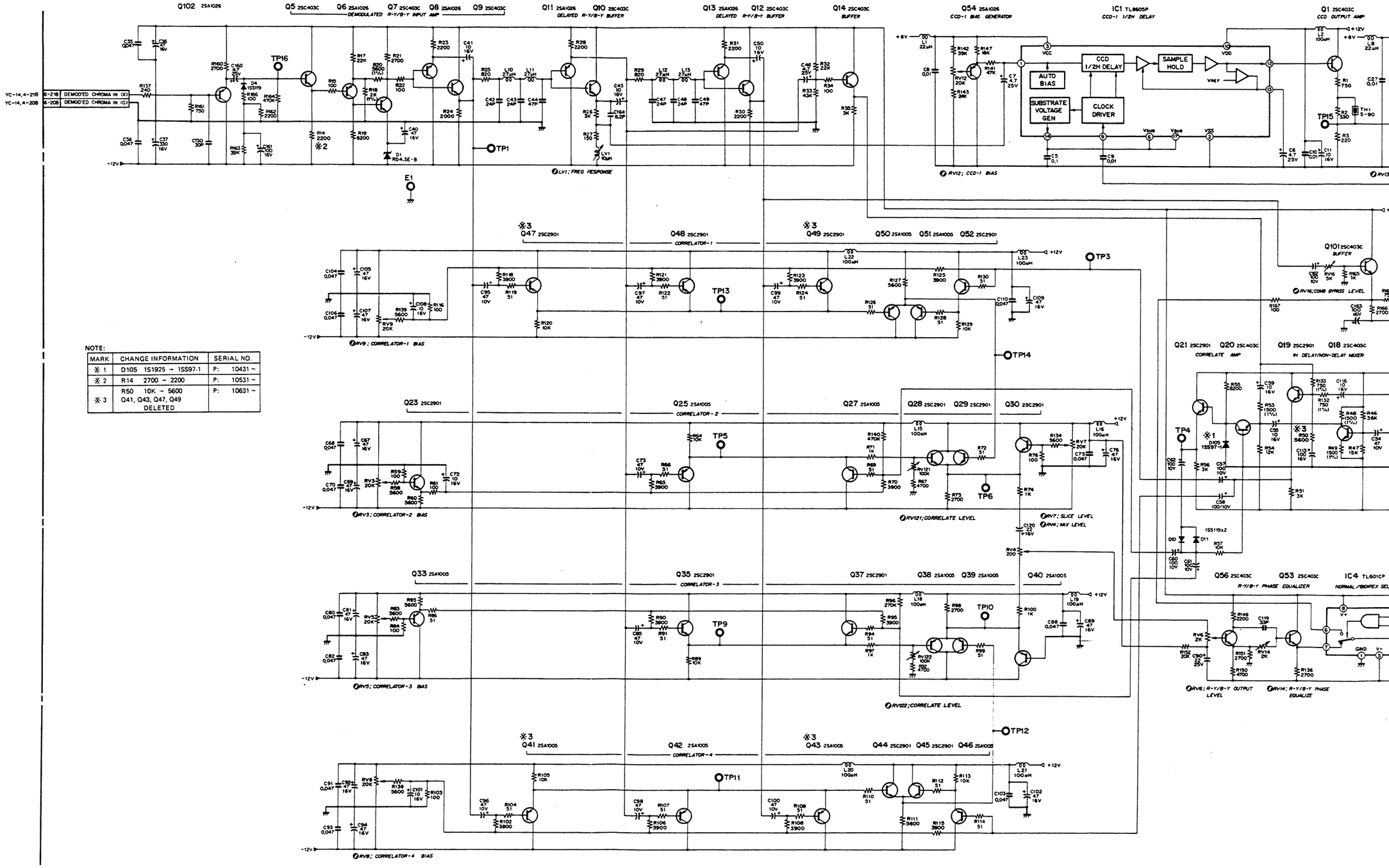




CV601	C - 2	Q1	O - 7	RV1	O - 5	TP603	B - 3
		Q2	O - 5	RV2	O - 3	TP604	B - 3
D1	O - 7	Q3	O - 5	RV3	L - 5	TP607	D - 1
D2	O - 4	Q4	O - 4	RV4	L - 7	TP608	D - 1
D3	K - 8	Q5	N - 8	RV5	K - 5	TP609	E - 2
D4	M - 8	Q6	N - 8	RV6	L - 7	TP610	C - 3
D10	M - 5	Q7	O - 8	RV7	L - 7	TP701	I - 2
D11	M - 5	Q8	N - 7	RV8	M - 4	TP704	G - 2
D105	M - 5	Q9	N - 7	RV9	K - 4	TP705	J - 2
D201	H - 4	Q10	N - 7	RV12	O - 8	TP711	L - 2
D202	I - 4	Q11	N - 7	RV13	O - 6	TP712	L - 3
D205	J - 6	Q12	M - 6	RV14	M - 8	TP713	G - 1
D401	E - 3	Q13	M - 6	RV16	M - 6	TP801	L - 1
D603	H - 8	Q14	N - 6	RV121	L - 6	TP802	M - 1
D701	I - 1	Q15	O - 4	RV122	L - 6	TP803	L - 1
D702	J - 1	Q16	O - 4	RV201	G - 4	TP804	M - 2
D703	H - 2	Q17	O - 5	RV202	H - 3		
D704	G - 2	Q18	N - 5	RV203	I - 4	X1	Q - 7
		Q19	N - 5	RV204	H - 4	X401	F - 3
DL501	B - 7	Q20	M - 5	RV205	I - 3	X601	C - 2
		Q21	M - 5	RV206	J - 7		
E1	O - 9	Q23	L - 5	RV207	J - 5		
E2	K - 7	Q25	L - 6	RV208	J - 5		
E201	H - 8	Q27	L - 6	RV209	J - 3		
E202	J - 3	Q28	L - 6	RV210	J - 3		
E401	F - 8	Q29	L - 6	RV401	F - 3		
E402	G - 4	Q30	L - 6	RV402	F - 6		
E501	B - 9	Q31	L - 8	RV501	B - 6		
E502	A - 5	Q32	L - 8	RV502	B - 5		
E701	F - 2	Q33	K - 5	RV503	C - 7		
		Q35	K - 6	RV504	C - 7		
F601	C - 1	Q37	K - 6	RV602	A - 3		
		Q38	K - 7	RV603	B - 3		
IC1	O - 7	Q39	K - 7	RV607	C - 2		
IC2	O - 6	Q40	K - 7	RV608	E - 1		
IC3	O - 9	Q41	M - 3	RV609	D - 2		
IC4	L - 8	Q42	N - 3	RV610	O - 2		
IC5	K - 8	Q43	N - 3	RV701	H - 1		
IC201	H - 7	Q44	N - 3	RV703	I - 1		
IC202	H - 6	Q45	N - 3	RV705	F - 2		
IC203	H - 6	Q46	O - 4	RV804	M - 1		
IC204	H - 5	Q47	K - 4				
IC205	G - 3	Q48	L - 4	S1	M - 1		
IC206	I - 7	Q49	L - 4	S401	G - 1		
IC207	I - 6	Q50	L - 4	S402	G - 8		
IC208	I - 6	Q51	L - 4	S501	F - 1		
IC209	I - 5	Q52	L - 4	S502	F - 1		
IC210	I - 3	Q53	L - 7	S801	M - 1		
IC211	J - 7	Q54	O - 8				
IC212	J - 6	Q55	O - 6	TH1	O - 6		
IC213	J - 5	Q56	M - 7				
IC214	J - 4	Q101	N - 6	TP1	M - 7		
IC215	J - 3	Q102	N - 8	TP2	N - 6		
IC401	D - 6	Q201	H - 5	TP3	N - 5		
IC402	E - 5	Q202	H - 3	TP4	M - 5		
IC403	D - 3	Q203	I - 5	TP5	L - 6		
IC405	E - 4	Q204	J - 4	TP6	L - 7		
IC406	F - 4	Q205	J - 3	TP7	L - 8		
IC407	F - 4	Q206	I - 3	TP9	K - 7		
IC408	E - 5	Q501	B - 8	TP10	K - 7		
IC409	F - 5	Q502	A - 6	TP11	M - 3		
IC410	F - 6	Q503	C - 6	TP12	O - 3		
IC411	F - 7	Q504	C - 4	TP13	K - 4		
IC412	E - 7	Q505	C - 4	TP14	L - 4		
IC501	B - 5	Q506	C - 4	TP15	O - 6		
IC502	B - 4	Q507	C - 4	TP16	M - 7		
IC503	B - 4	Q508	B - 7	TP17	O - 6		
IC504	C - 8	Q509	A - 5	TP201	H - 7		
IC505	C - 8	Q601	A - 1	TP202	H - 4		
IC506	A - 4	Q602	B - 1	TP203	H - 3		
IC507	B - 4	Q605	B - 1	TP204	J - 7		
IC605	A - 2	Q607	F - 1	TP205	I - 7		
IC607	B - 2	Q608	E - 1	TP206	I - 4		
IC609	A - 2	Q609	H - 8	TP207	J - 6		
IC610	B - 2	Q610	H - 8	TP208	J - 5		
IC613	D - 1	Q701	H - 1	TP211	G - 8		
IC614	C - 2	Q703	J - 1	TP212	H - 8		
IC616	D - 2			TP213	J - 8		
IC617	D - 1			TP214	I - 3		
IC618	E - 2			TP401	D - 5		
IC619	E - 2			TP402	D - 5		
IC701	L - 1			TP403	G - 5		
IC702	K - 1			TP404	D - 5		
IC703	K - 2			TP405	G - 6		
IC704	H - 2			TP406	G - 6		
IC706	L - 2			TP407	G - 5		
IC707	K - 2			TP408	G - 6		
IC708	K - 3			TP409	E - 8		
IC709	J - 2			TP410	E - 8		
IC711	G - 2			TP411	D - 8		
IC801	N - 1			TP412	E - 8		
IC802	M - 1			TP413	G - 8		
IC803	M - 1			TP501	B - 8		
IC804	M - 2			TP502	A - 6		
IC805	O - 3			TP503	A - 5		
IC806	N - 3			TP504	A - 4		
IC807	M - 3			TP505	C - 3		
IC808	N - 1			TP506	C - 4		
				TP507	C - 4		
LV1	O - 7			TP508	C - 8		
LV501	C - 6			TP509	C - 7		
LV601	B - 1			TP510	C - 5		



EN-21 (1/4) (CHROMA COMB FILTER)



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	D105 1S1925 → 1SS97-1	P: 10431~
※2	R14 2700 → 2200	P: 10531~
※3	R50 10K → 5600 Q41, Q43, Q47, Q49 DELETED	P: 10631~

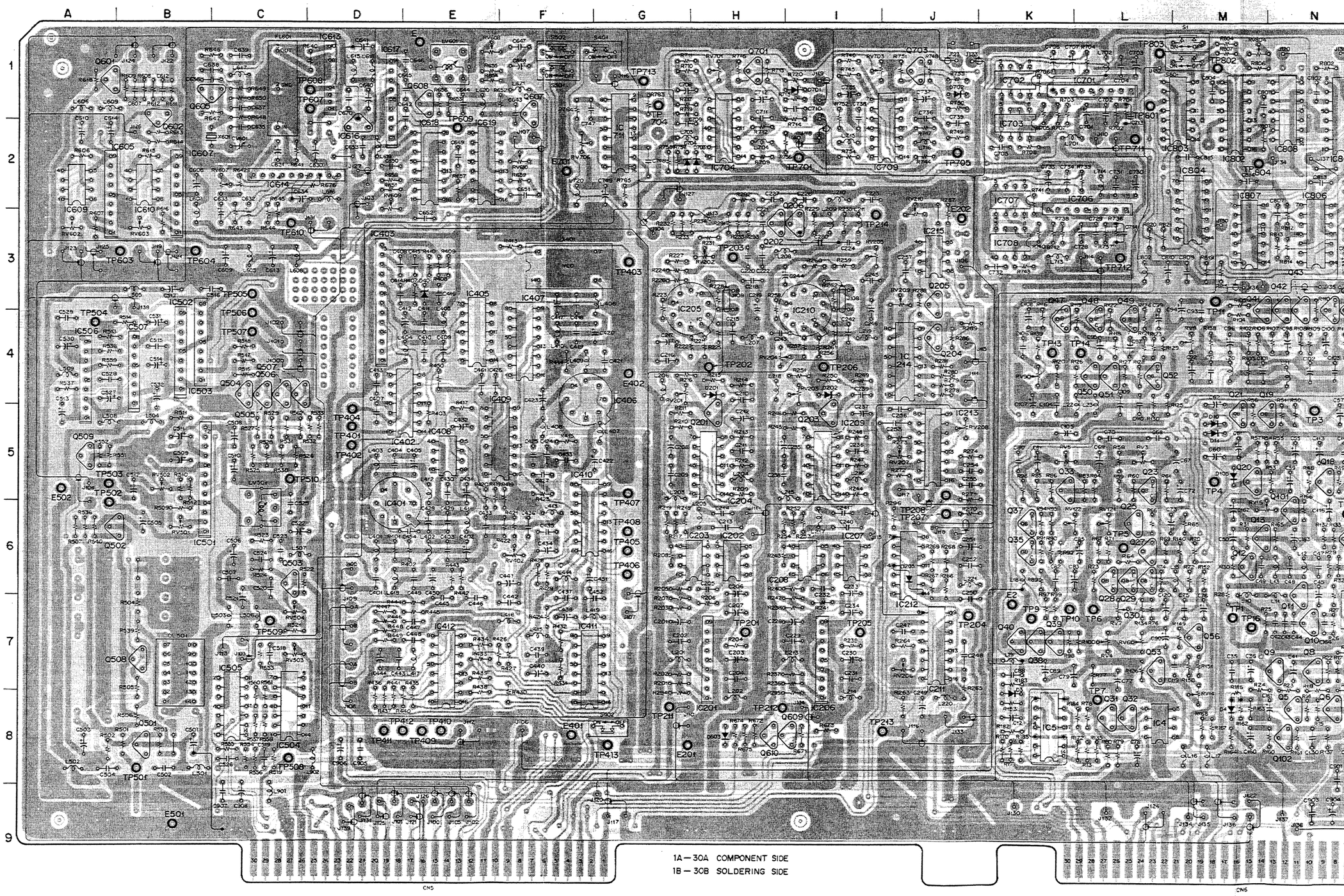
EN-21 (1/4)
EN-21 (1/4)

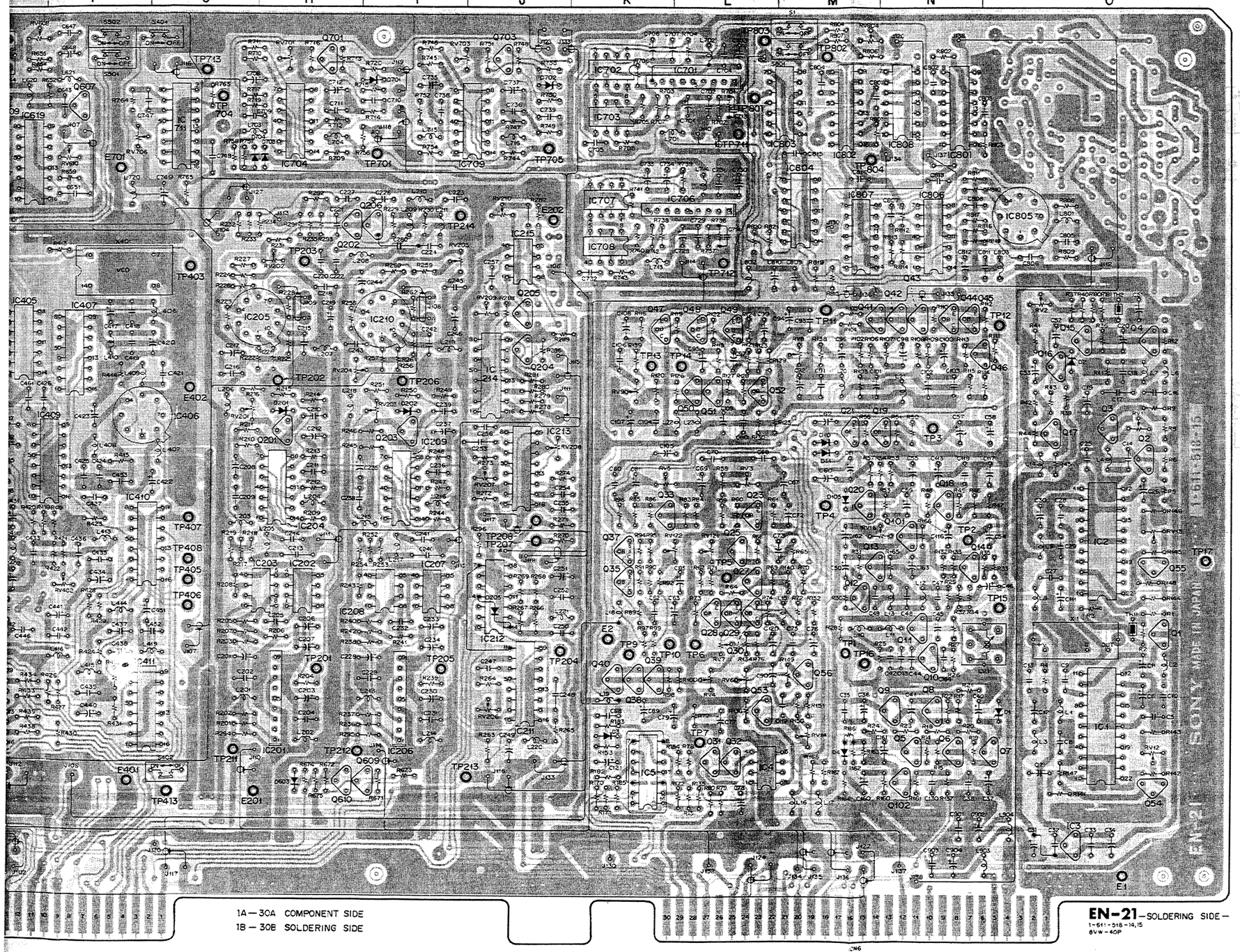
Q11 2SA1026 Q10 2SC403C — DELAYED R-Y/B-Y BUFFER
Q13 2SA1026 Q12 2SC403C — DELAYED R-Y/B-Y BUFFER
Q14 2SC403C — BUFFER
Q54 2SA1026 — CCD-1 BIAS GENERATOR
IC1 TL8605P — CCD-1 1/2H DELAY
Q1 2SC405C — CCD OUTPUT AMP
Q55 2SA1026 — CCD-2 BIAS GENERATOR
IC2 TL8605P — CCD-2 1/2H DELAY
AUTO BIAS
SUBSTRATE VOLTAGE GEN
CCD 1/2H DELAY
SAMPLE HOLD
CLOCK DRIVER
VCC
VDD
VREF
VBUB
VSS
TP1
TP15
TP17
LV1; FREQ RESPONSE
RV12; CCD-1 BIAS
RV13; CCD-2 BIAS
※3 Q47 2SC2901
Q48 2SC2901 — CORRELATOR-1
※3 Q49 2SC2901
Q50 2SA1005 Q51 2SA1005 Q52 2SC2901
Q101 2SC403C — BUFFER
X1 10.700MHz OSC
TP3
TP13
TP14
RV16; COMB BYPASS LEVEL
DELAYED TDM C OUT (X) 6-18B — PR-48,23A
DELAYED TDM C OUT (G) 6-19B — PR-48,24A
Q21 2SC2901 Q20 2SC403C — CORRELATE AMP
Q19 2SC2901 Q18 2SC405C — 1H DELAY/NON-DELAY MIXER
Q17 2SC403C — BUFFER
Q16 2SC403C Q15 2SA1026 — 1H DELAYED R-Y/B-Y AMP
Q4 2SA1005 Q3 2SA1005 — LPF
Q2 2SC403C — FINE DELAY
Q25 2SA1005 — CORRELATOR-2
Q27 2SA1005 Q28 2SC2901 Q29 2SC2901 Q30 2SC2901
TP4 TP5 TP6
※1 D105 1SS97-1
D10 1SS119×2 D11
RV121; CORRELATE LEVEL
RV7; SLICE LEVEL
RV4; MIX LEVEL
RV2; 1H DELAYED R-Y/B-Y LEVEL
RV1; 1H DELAY
D2 RD4.3E-B
Q35 2SC2901 — CORRELATOR-3
Q37 2SC2901 Q38 2SA1005 Q39 2SA1005 Q40 2SA1005
TP9 TP10
RV122; CORRELATE LEVEL
Q56 2SC403C — R-Y/B-Y PHASE EQUALIZER
Q53 2SC403C
IC4 TL601CP — NORMAL/BOREX SELECTOR
Q31 2SC403C Q32 2SA1026 — R-Y/B-Y OUTPUT BUFFER
IC5 TC4011BP
L; COMB FILTER OFF IN 6-27B — SY-4,14-27B
L; NORM FWD IN 2/4
R-Y/B-Y OUT (X) 6-29B — PR-48,29A8
R-Y/B-Y OUT (G) 6-28B — PR-48,28A8
TP7
E2
RV6; R-Y/B-Y OUTPUT LEVEL
RV14; R-Y/B-Y PHASE EQUALIZE
※3 Q41 2SA1005
Q42 2SA1005 — CORRELATOR-4
※3 Q43 2SA1005
Q44 2SC2901 Q45 2SC2901 Q46 2SA1005
TP11 TP12
IC3 NJM78L08A — +8V REGULATOR
REG +12V IN 2/4
GND 2/4
REG -12V IN 2/4

EN-21(1/4)
1-611-518-13,14,15
8VW-40P

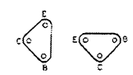
EN-21 EN-21

EN-21 (VIDEO ENCODER)

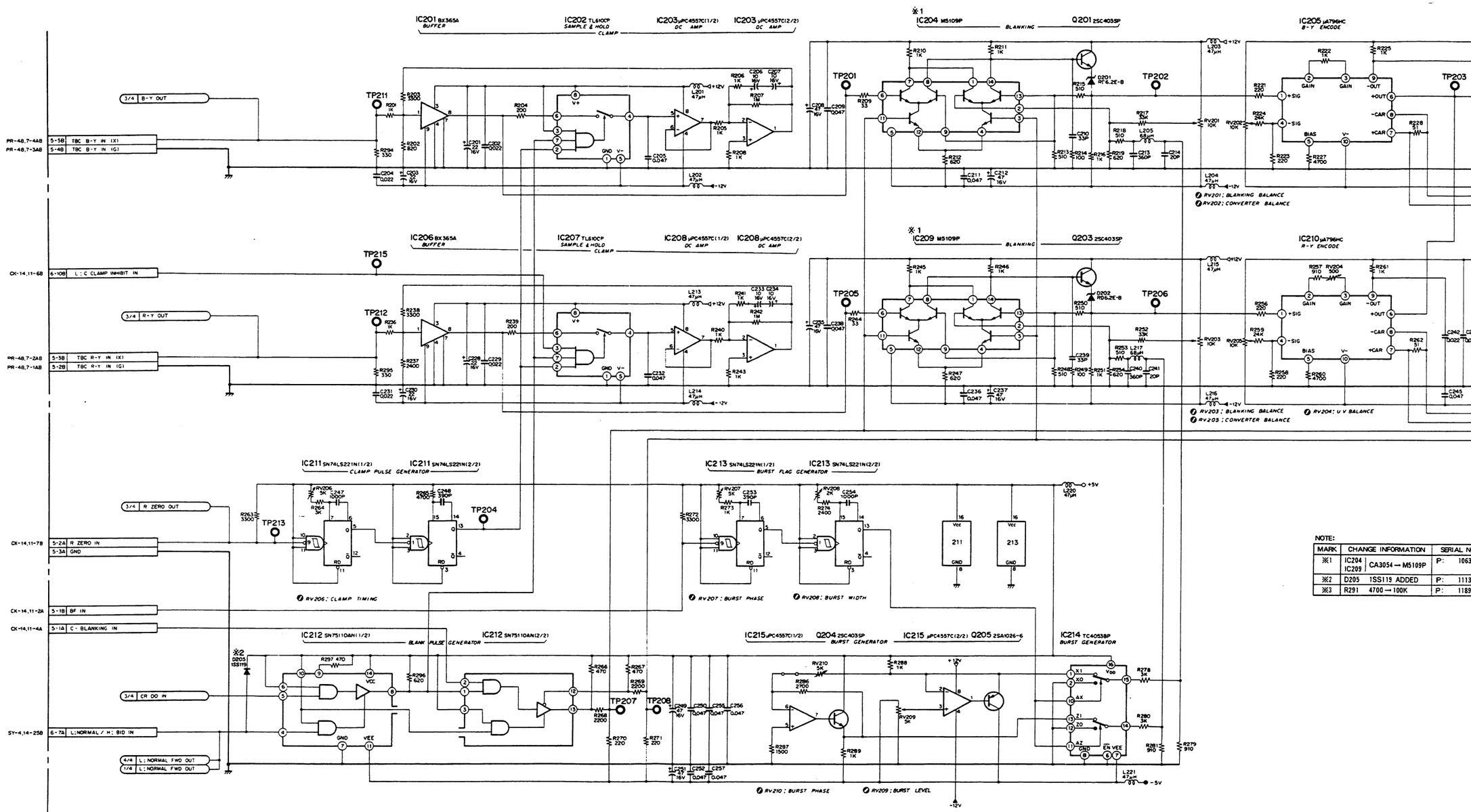




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		Q2	O - 5	RV2	O - 3	TP604	B - 3
D1	O - 7	Q3	O - 5	RV3	L - 5	TP607	D - 1
D2	O - 4	Q4	O - 4	RV4	L - 7	TP608	D - 1
D3	K - 8	Q5	N - 8	RV5	K - 5	TP609	E - 2
D4	M - 8	Q6	N - 8	RV6	L - 7	TP610	C - 3
D10	M - 5	Q7	O - 8	RV7	L - 7	TP701	I - 2
D11	M - 5	Q8	N - 7	RV8	M - 4	TP704	G - 2
D105	M - 5	Q9	N - 7	RV9	K - 4	TP705	J - 2
D201	H - 4	Q10	N - 7	RV12	O - 8	TP711	L - 2
D202	I - 4	Q11	N - 7	RV13	O - 6	TP712	L - 3
D205	J - 6	Q12	M - 6	RV14	M - 8	TP713	G - 1
D401	E - 3	Q13	M - 6	RV15	M - 6	TP801	L - 1
D603	H - 8	Q14	N - 6	RV121	L - 6	TP802	M - 1
D701	I - 1	Q15	O - 4	RV122	L - 6	TP803	L - 1
D702	J - 1	Q16	O - 4	RV201	G - 4	TP804	M - 2
D703	H - 2	Q17	O - 5	RV202	H - 3		
D704	G - 2	Q18	N - 5	RV203	I - 4	X1	O - 7
		Q19	N - 5	RV204	H - 4	X401	F - 3
DL501	B - 7	Q20	M - 5	RV205	I - 3	X601	C - 2
		Q21	M - 5	RV206	J - 7		
E1	O - 9	Q23	L - 5	RV207	J - 5		
E2	K - 7	Q25	L - 6	RV208	J - 5		
E201	H - 8	Q27	L - 6	RV209	J - 3		
E202	J - 3	Q28	L - 6	RV210	J - 3		
E401	F - 8	Q29	L - 6	RV401	F - 3		
E402	G - 4	Q30	L - 6	RV402	F - 6		
E501	B - 9	Q31	L - 8	RV501	B - 6		
E502	A - 5	Q32	L - 8	RV502	B - 5		
E701	F - 2	Q33	K - 5	RV503	C - 7		
		Q35	K - 6	RV504	C - 7		
F601	C - 1	Q36	K - 6	RV602	A - 3		
		Q38	K - 7	RV603	B - 3		
IC1	O - 7	Q39	K - 7	RV607	C - 2		
IC2	O - 6	Q40	K - 7	RV608	E - 1		
IC3	O - 9	Q41	M - 3	RV609	D - 2		
IC4	L - 8	Q42	N - 3	RV610	F - 2		
IC5	K - 8	Q43	N - 3	RV701	H - 1		
IC201	H - 7	Q44	N - 3	RV703	I - 1		
IC202	H - 6	Q45	N - 3	RV706	F - 2		
IC203	H - 6	Q46	O - 4	RV804	M - 1		
IC204	H - 5	Q47	K - 4				
IC205	G - 3	Q48	L - 4	S1	M - 1		
IC206	I - 7	Q49	L - 4	S401	G - 1		
IC207	I - 6	Q50	L - 4	S402	G - 8		
IC208	I - 6	Q51	L - 4	S501	F - 1		
IC209	I - 5	Q52	L - 4	S502	F - 1		
IC210	I - 3	Q53	L - 7	S801	M - 1		
IC211	J - 7	Q54	O - 8				
IC212	J - 6	Q55	O - 6	TH1	O - 6		
IC213	J - 5	Q56	M - 7				
IC214	J - 4	Q101	N - 6	TP1	M - 7		
IC215	J - 3	Q102	N - 8	TP2	N - 6		
IC401	D - 6	Q201	H - 5	TP3	N - 5		
IC402	E - 5	Q202	H - 3	TP4	M - 5		
IC403	D - 3	Q203	I - 5	TP5	L - 5		
IC405	E - 4	Q204	J - 4	TP6	L - 7		
IC406	F - 4	Q205	J - 3	TP7	L - 6		
IC407	F - 4	Q206	I - 3	TP9	K - 7		
IC408	E - 5	Q501	B - 8	TP10	K - 7		
IC409	F - 5	Q502	A - 6	TP11	M - 3		
IC410	F - 6	Q503	C - 6	TP12	O - 3		
IC411	F - 7	Q504	C - 4	TP13	K - 4		
IC412	E - 7	Q505	C - 4	TP14	L - 4		
IC501	B - 5	Q506	C - 4	TP15	O - 6		
IC502	B - 4	Q507	C - 4	TP16	M - 7		
IC503	B - 4	Q508	B - 7	TP17	O - 6		
IC504	C - 8	Q509	A - 5	TP201	H - 7		
IC505	C - 8	Q601	A - 1	TP202	H - 4		
IC506	A - 4	Q602	B - 1	TP203	H - 3		
IC507	B - 4	Q605	B - 1	TP204	J - 7		
IC508	A - 2	Q607	F - 1	TP205	I - 7		
IC509	A - 2	Q609	H - 8	TP206	I - 4		
IC610	B - 2	Q610	H - 8	TP207	J - 6		
IC613	D - 1	Q701	H - 1	TP208	J - 5		
IC614	C - 2	Q703	J - 1	TP211	G - 8		
IC616	D - 2			TP212	H - 8		
IC617	D - 1			TP213	J - 8		
IC618	E - 2			TP214	I - 3		
IC619	E - 2			TP401	D - 5		
IC701	L - 1			TP402	D - 5		
IC702	K - 1			TP403	G - 3		
IC703	K - 2			TP404	D - 5		
IC704	H - 2			TP405	G - 6		
IC706	L - 2			TP406	G - 6		
IC707	K - 2			TP407	G - 5		
IC708	K - 3			TP408	G - 6		
IC709	J - 2			TP409	E - 8		
IC711	G - 2			TP410	E - 8		
IC801	N - 1			TP411	D - 8		
IC802	M - 1			TP412	E - 8		
IC803	M - 1			TP413	G - 8		
IC804	M - 2			TP501	B - 8		
IC805	C - 3			TP502	A - 6		
IC806	N - 3			TP503	A - 5		
IC807	M - 3			TP504	A - 4		
IC808	N - 1			TP505	C - 3		
				TP506	C - 4		
LV1	O - 7			TP507	C - 4		
LV501	C - 6			TP508	C - 8		
LV601	E - 1			TP509	C - 7		
				TP510	C - 5		

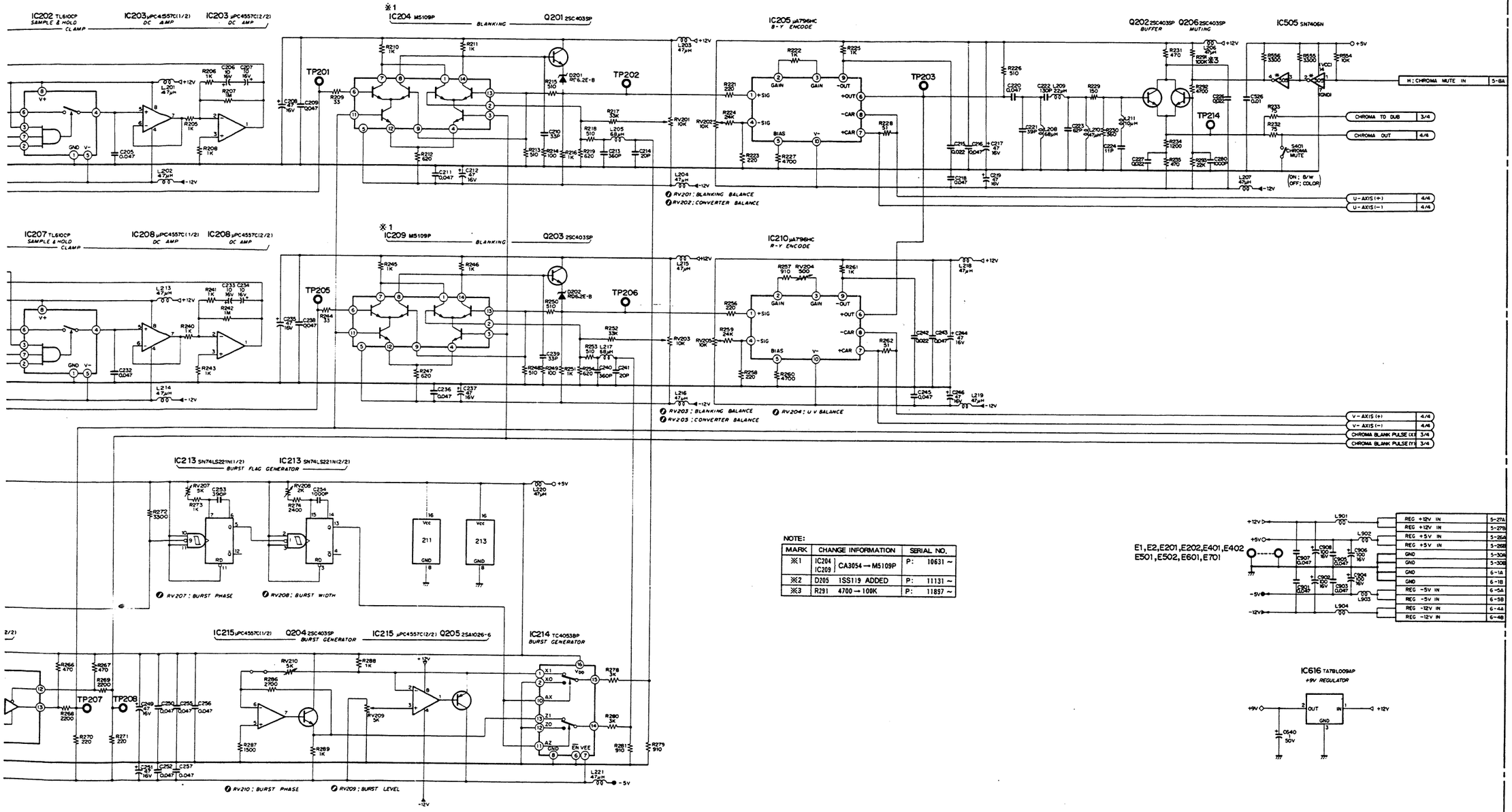


EN-21 (2/4) (VIDEO ENCODER)



NOTE:

MARK	CHANGE INFORMATION		SERIAL N
※1	IC204 IC209	CA3054 → M5109P	P: 1063
※2	D205	1SS119 ADDED	P: 1113
※3	R291	4700 → 100K	P: 1189



NOTE:

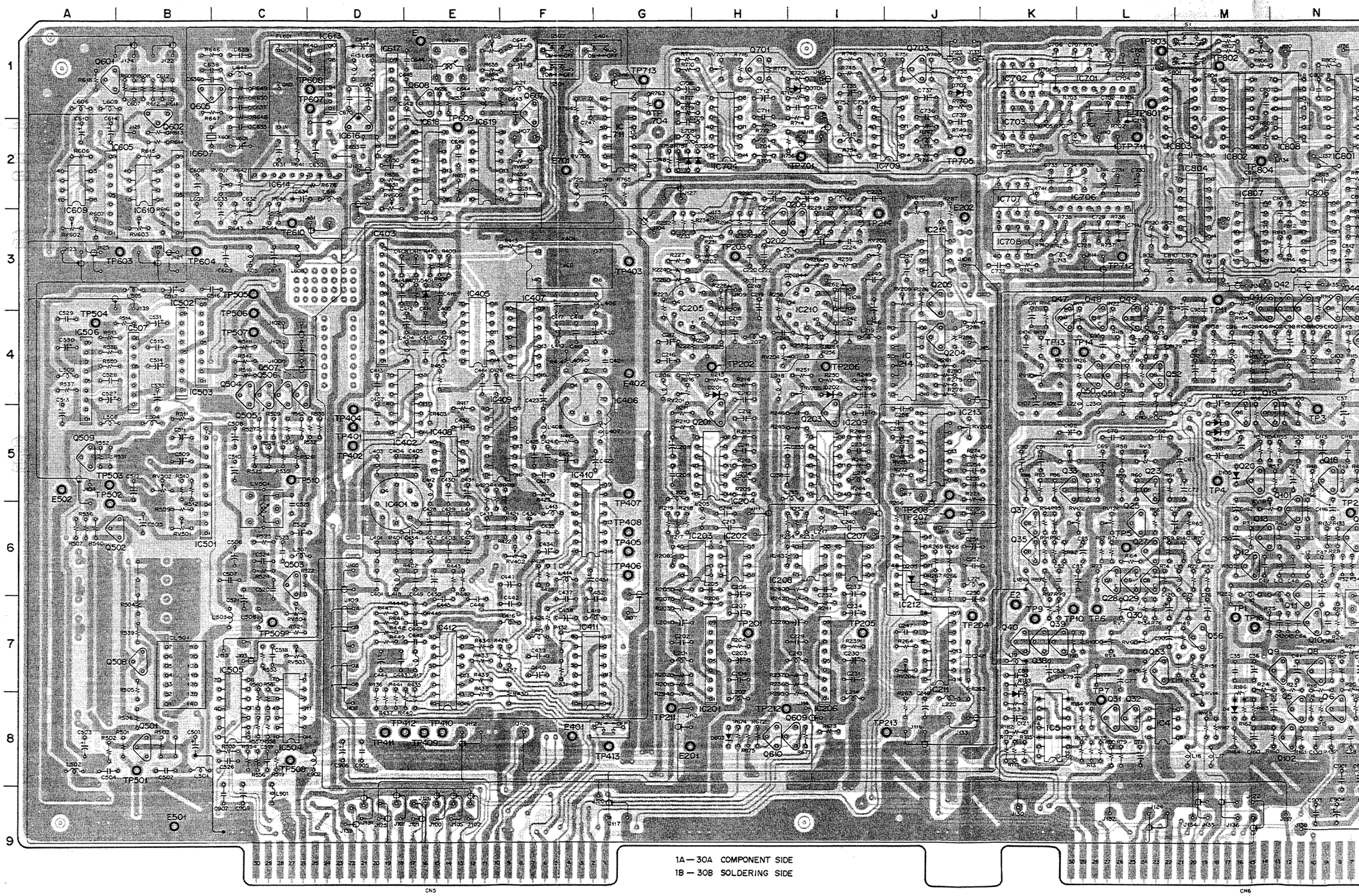
MARK	CHANGE INFORMATION		SERIAL NO.
※1	IC204 / IC209	CA3054 → M5109P	P: 10631 ~
※2	D205	1SS119 ADDED	P: 11131 ~
※3	R291	4700 → 100K	P: 11897 ~

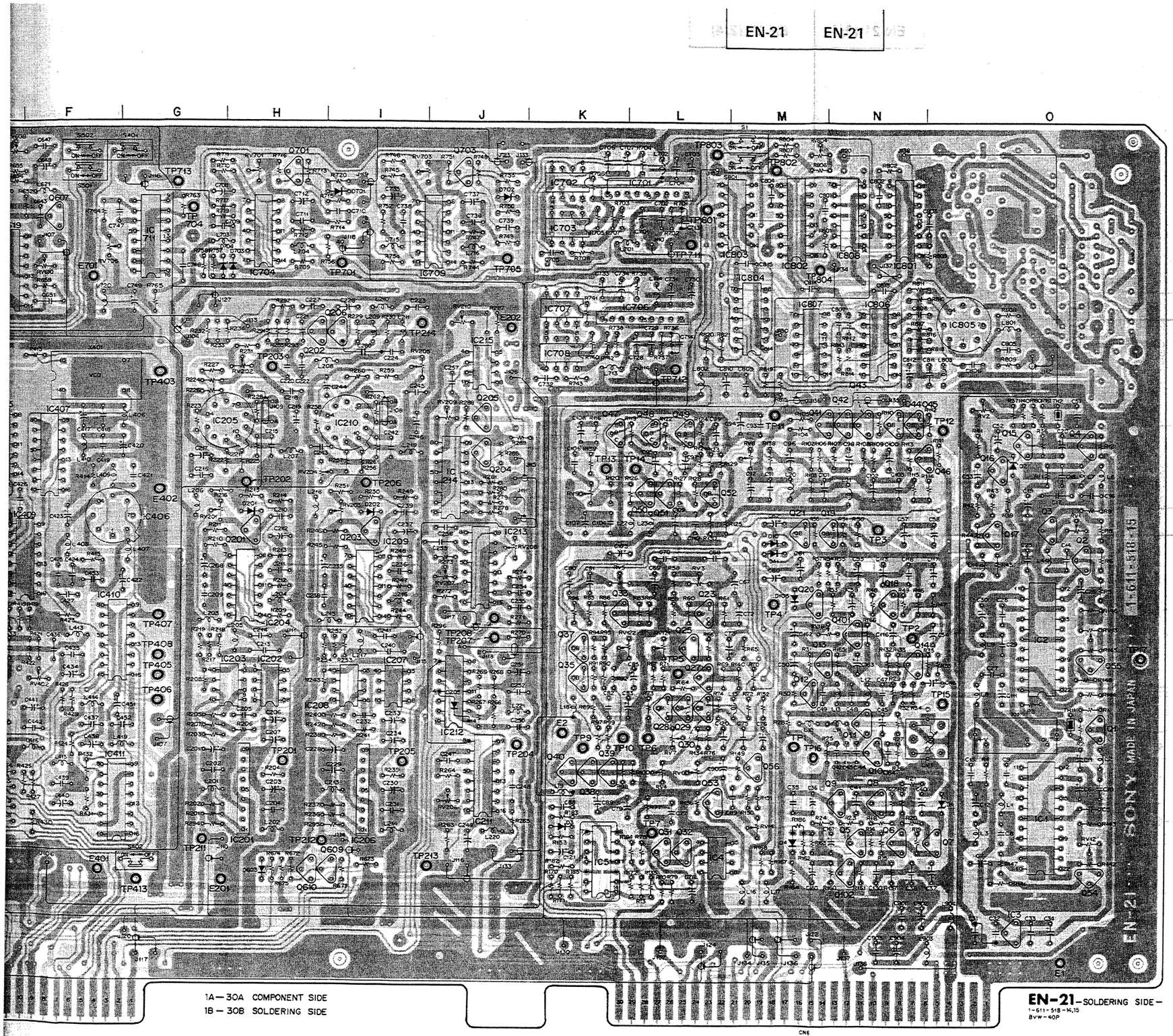
EN-21(2/4)

1-611-518-13,14,15
8VW-40P

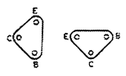
EN-21 EN-21

EN-21 (VIDEO ENCODER)

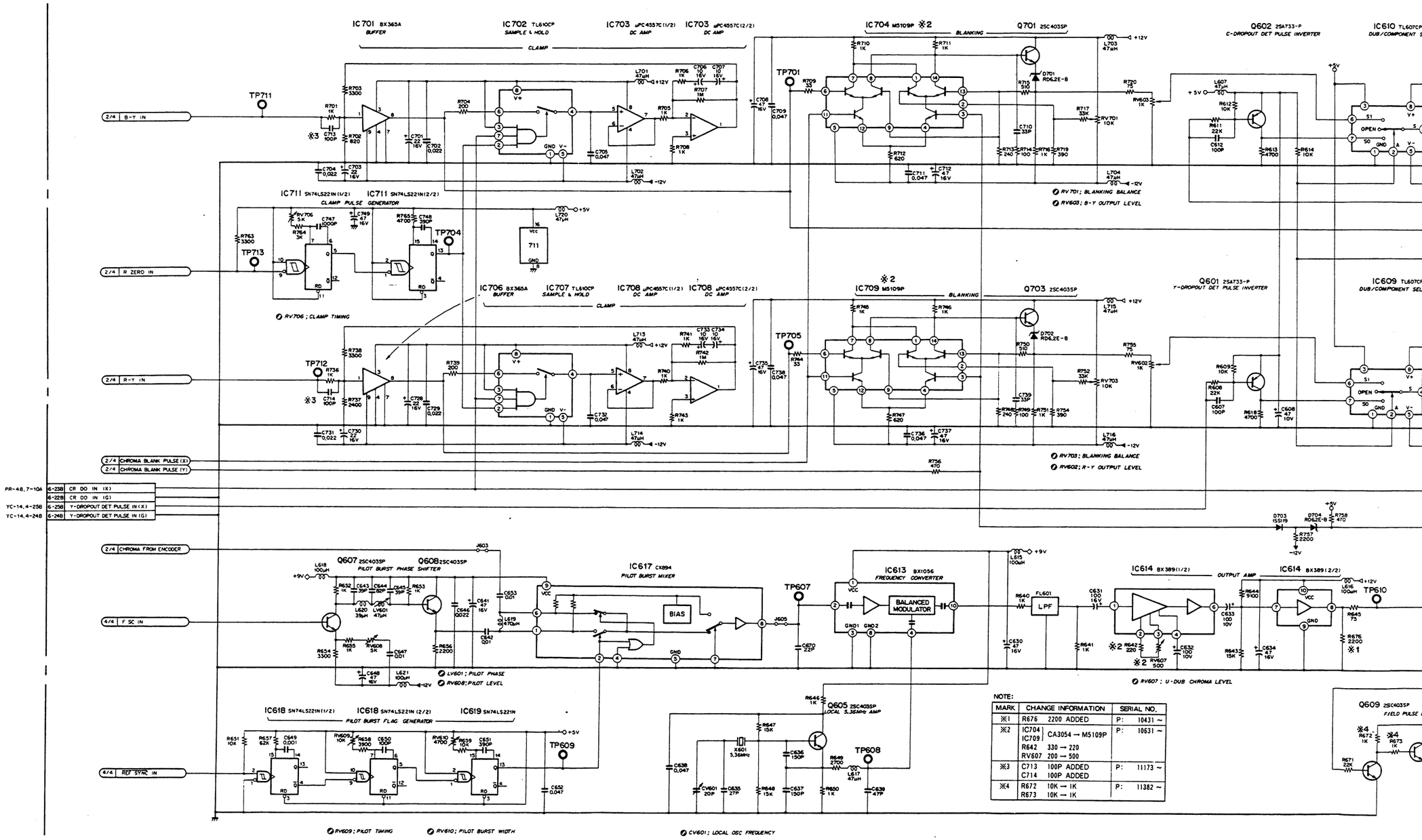




CV601	C - 2	Q1	O - 7	RV1	O - 5	TP603	B - 3
		Q2	O - 5	RV2	O - 3	TP604	B - 3
D1	O - 7	Q3	O - 5	RV3	L - 5	TP607	D - 1
D2	O - 4	Q4	O - 4	RV4	L - 7	TP608	D - 1
D3	K - 8	Q5	N - 8	RV5	K - 5	TP609	E - 2
D4	M - 8	Q6	N - 8	RV6	L - 7	TP610	C - 3
D10	M - 5	Q7	O - 8	RV7	L - 7	TP701	I - 2
D11	M - 5	Q8	N - 7	RV8	M - 4	TP704	G - 2
D105	M - 5	Q9	N - 7	RV9	K - 4	TP705	J - 2
D201	H - 4	Q10	N - 7	RV12	O - 8	TP711	L - 2
D202	I - 4	Q11	N - 7	RV13	O - 6	TP712	L - 3
D205	J - 6	Q12	M - 6	RV14	M - 8	TP713	G - 1
D401	E - 3	Q13	M - 6	RV16	M - 6	TP801	L - 1
D603	H - 8	Q14	N - 6	RV121	L - 6	TP802	M - 1
D701	I - 1	Q15	O - 4	RV122	L - 6	TP803	L - 1
D702	J - 1	Q16	O - 4	RV201	G - 4	TP804	M - 2
D703	H - 2	Q17	O - 5	RV202	H - 3		
D704	G - 2	Q18	N - 5	RV203	I - 4	X1	O - 7
		Q19	N - 5	RV204	H - 4	X401	F - 3
DL501	B - 7	Q20	M - 5	RV205	I - 3	X601	C - 2
		Q21	M - 5	RV206	J - 7		
E1	O - 9	Q23	L - 5	RV207	J - 5		
E2	K - 7	Q25	L - 6	RV208	J - 5		
E201	H - 8	Q27	L - 6	RV209	J - 3		
E202	J - 3	Q28	L - 6	RV210	J - 3		
E401	F - 8	Q29	L - 6	RV401	F - 3		
E402	G - 4	Q30	L - 6	RV402	F - 6		
E501	B - 9	Q31	L - 8	RV501	B - 6		
E502	A - 5	Q32	L - 8	RV502	B - 5		
E701	F - 2	Q33	K - 5	RV503	C - 7		
		Q35	K - 6	RV504	C - 7		
F601	C - 1	Q36	K - 6	RV602	A - 3		
		Q37	K - 6	RV603	B - 3		
IC1	O - 7	Q38	K - 7	RV607	C - 2		
IC2	O - 6	Q39	K - 7	RV608	E - 1		
IC3	O - 9	Q40	K - 7	RV609	D - 2		
IC4	L - 8	Q41	M - 3	RV610	F - 2		
IC5	K - 8	Q42	N - 3	RV701	H - 1		
IC201	H - 7	Q43	N - 3	RV703	I - 1		
IC202	H - 6	Q44	N - 3	RV706	F - 2		
IC203	H - 6	Q45	N - 3	RV804	M - 1		
IC204	H - 5	Q46	O - 4				
IC205	G - 3	Q47	K - 4				
IC206	I - 7	Q48	L - 4	S1	M - 1		
IC207	I - 6	Q49	L - 4	S401	G - 1		
IC208	I - 6	Q50	L - 4	S402	G - 8		
IC209	I - 5	Q51	L - 4	S501	F - 1		
IC210	T - 3	Q52	L - 4	S502	F - 1		
IC211	J - 7	Q53	L - 7	S801	M - 1		
IC212	J - 6	Q54	O - 8				
IC213	J - 5	Q55	O - 6	TH1	O - 6		
IC214	J - 4	Q56	M - 7				
IC215	J - 3	Q101	N - 6	TP1	M - 7		
IC401	D - 6	Q102	N - 8	TP2	N - 6		
IC402	E - 5	Q201	H - 5	TP3	N - 5		
IC403	D - 3	Q202	H - 3	TP4	M - 5		
IC405	E - 4	Q203	I - 5	TP5	L - 6		
IC406	F - 4	Q204	J - 4	TP6	L - 7		
IC407	F - 4	Q205	J - 3	TP7	L - 8		
IC408	E - 5	Q206	I - 3	TP8	K - 7		
IC409	F - 5	Q501	B - 8	TP10	K - 7		
IC410	F - 6	Q502	A - 6	TP11	M - 3		
IC411	F - 7	Q503	C - 6	TP12	O - 3		
IC412	E - 7	Q504	C - 4	TP13	K - 4		
IC501	B - 5	Q505	C - 4	TP14	L - 4		
IC502	B - 4	Q506	C - 4	TP15	O - 6		
IC503	B - 4	Q507	C - 4	TP16	M - 7		
IC504	C - 8	Q508	B - 7	TP17	O - 6		
IC505	C - 8	Q509	A - 5	TP201	H - 7		
IC506	A - 4	Q601	A - 1	TP202	H - 4		
IC507	B - 4	Q602	B - 1	TP203	H - 3		
IC605	A - 2	Q605	B - 1	TP204	J - 7		
IC607	B - 2	Q607	F - 1	TP205	I - 7		
IC609	A - 2	Q608	E - 1	TP206	I - 4		
IC610	B - 2	Q609	H - 8	TP207	J - 6		
IC613	D - 1	Q610	H - 8	TP208	J - 5		
IC614	C - 2	Q701	H - 1	TP211	G - 8		
IC616	D - 2	Q703	J - 1	TP212	H - 8		
IC617	D - 1			TP213	J - 8		
IC618	E - 2			TP214	I - 3		
IC619	E - 2			TP401	D - 5		
IC701	L - 1			TP402	D - 5		
IC702	K - 1			TP403	G - 3		
IC703	K - 2			TP404	D - 5		
IC704	H - 2			TP405	G - 6		
IC706	L - 2			TP406	G - 6		
IC707	K - 2			TP407	C - 5		
IC708	K - 3			TP408	G - 6		
IC709	J - 2			TP409	E - 8		
IC711	G - 2			TP410	E - 8		
IC801	N - 1			TP411	D - 8		
IC802	M - 1			TP412	E - 8		
IC803	M - 1			TP413	G - 8		
IC804	M - 2			TP501	B - 8		
IC805	O - 3			TP502	A - 6		
IC806	N - 3			TP503	A - 5		
IC807	M - 3			TP504	A - 4		
IC808	N - 1			TP505	C - 3		
				TP506	C - 4		
LV1	O - 7			TP507	C - 4		
LV501	C - 6			TP508	C - 8		
LV601	B - 1			TP509	C - 7		
				TP510	C - 5		

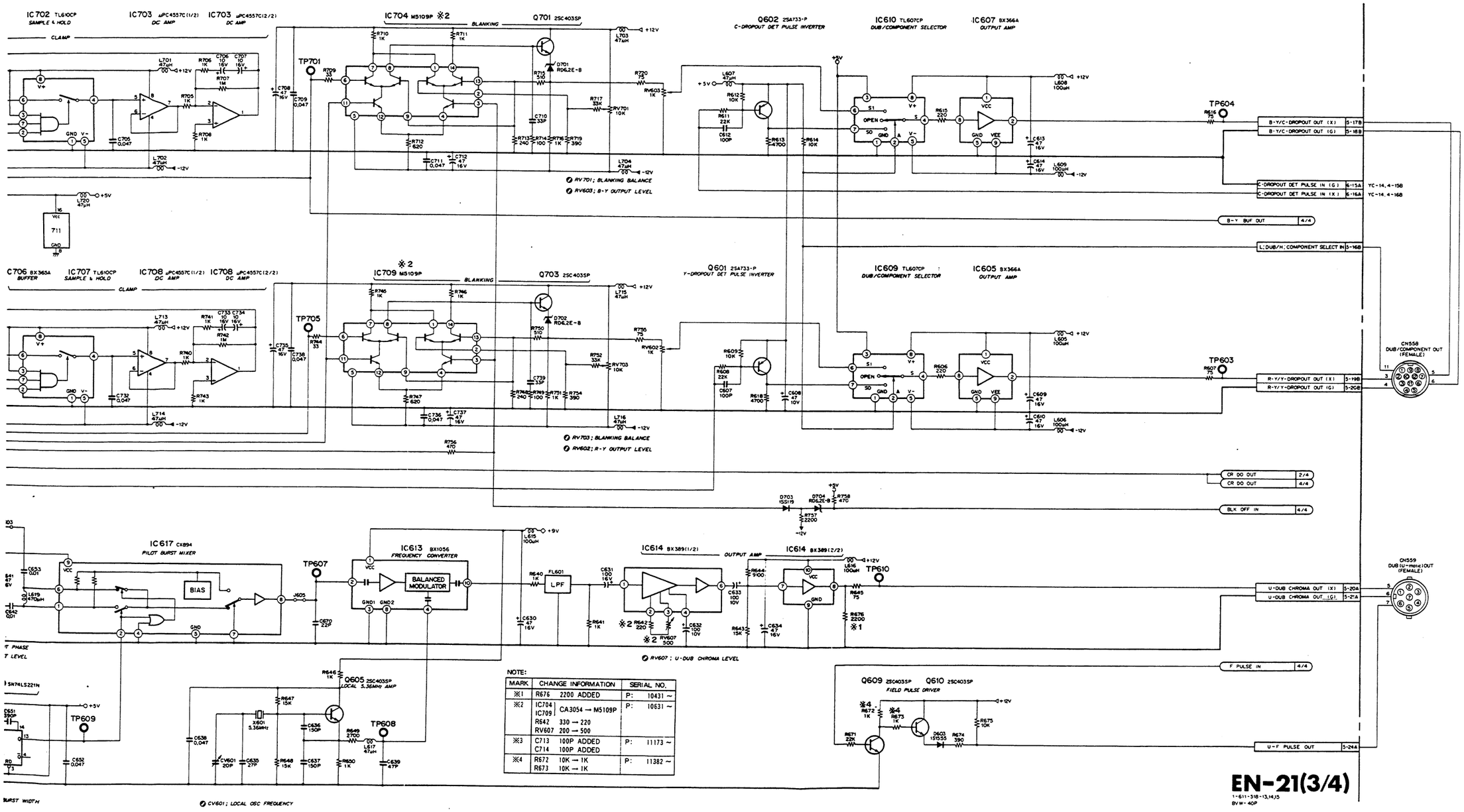


EN-21 (3/4) (VIDEO ENCODER)



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	R676 2200 ADDED	P: 10431 ~
※2	IC704 / IC709 CA3054 → M5109P R642 330 → 220 RV607 200 → 500	P: 10631 ~
※3	C713 100P ADDED C714 100P ADDED	P: 11173 ~
※4	R672 10K → 1K R673 10K → 1K	P: 11382 ~



NOTE:

MARK	CHANGE INFORMATION		SERIAL NO.
※1	R676	2200 ADDED	P: 10431 ~
※2	IC704 IC709 R642 RV607	CA3054 → M5109P 330 → 220 200 → 500	P: 10631 ~
※3	C713 C714	100P ADDED 100P ADDED	P: 11173 ~
※4	R672 R673	10K → 1K 10K → 1K	P: 11382 ~

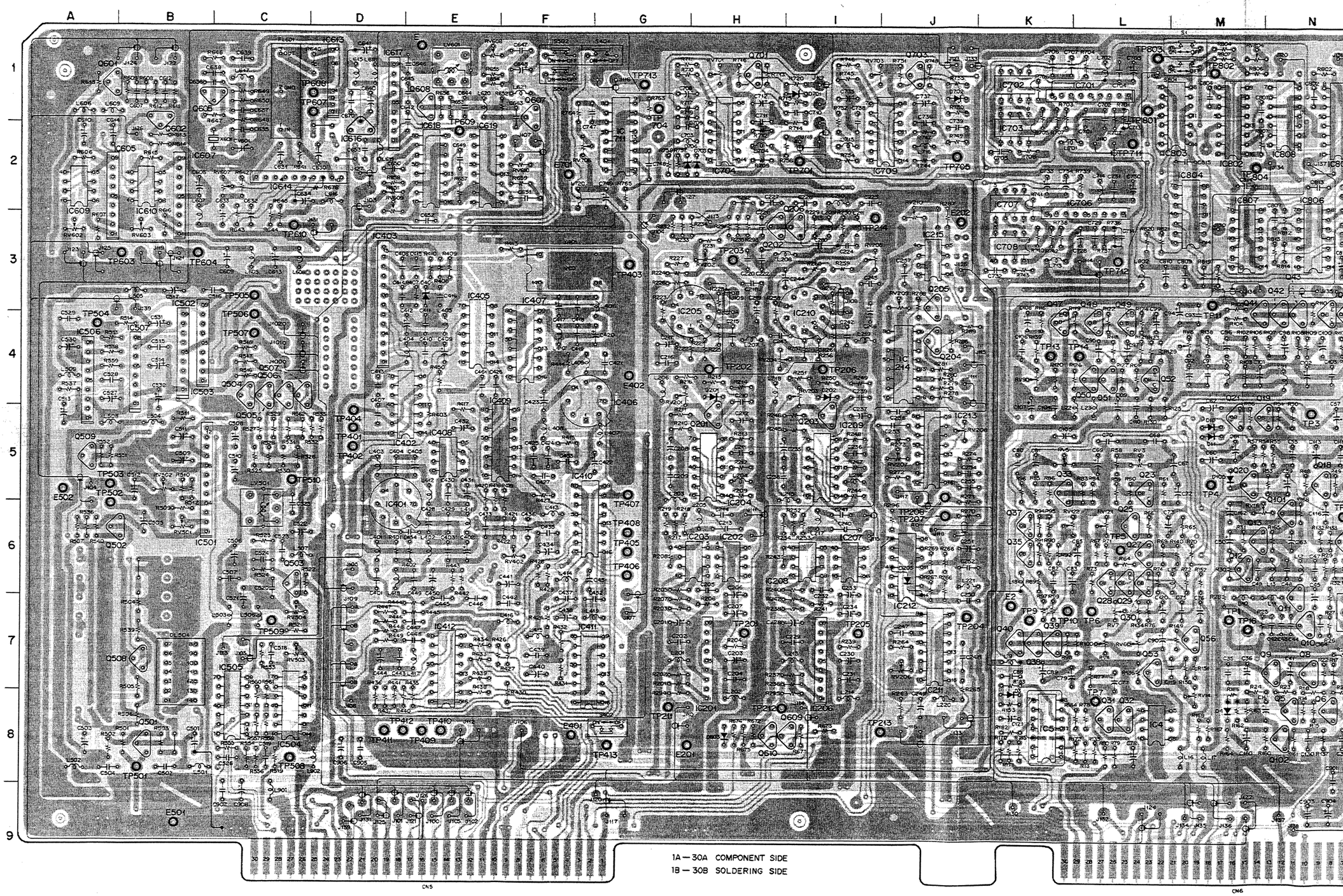
EN-21(3/4)

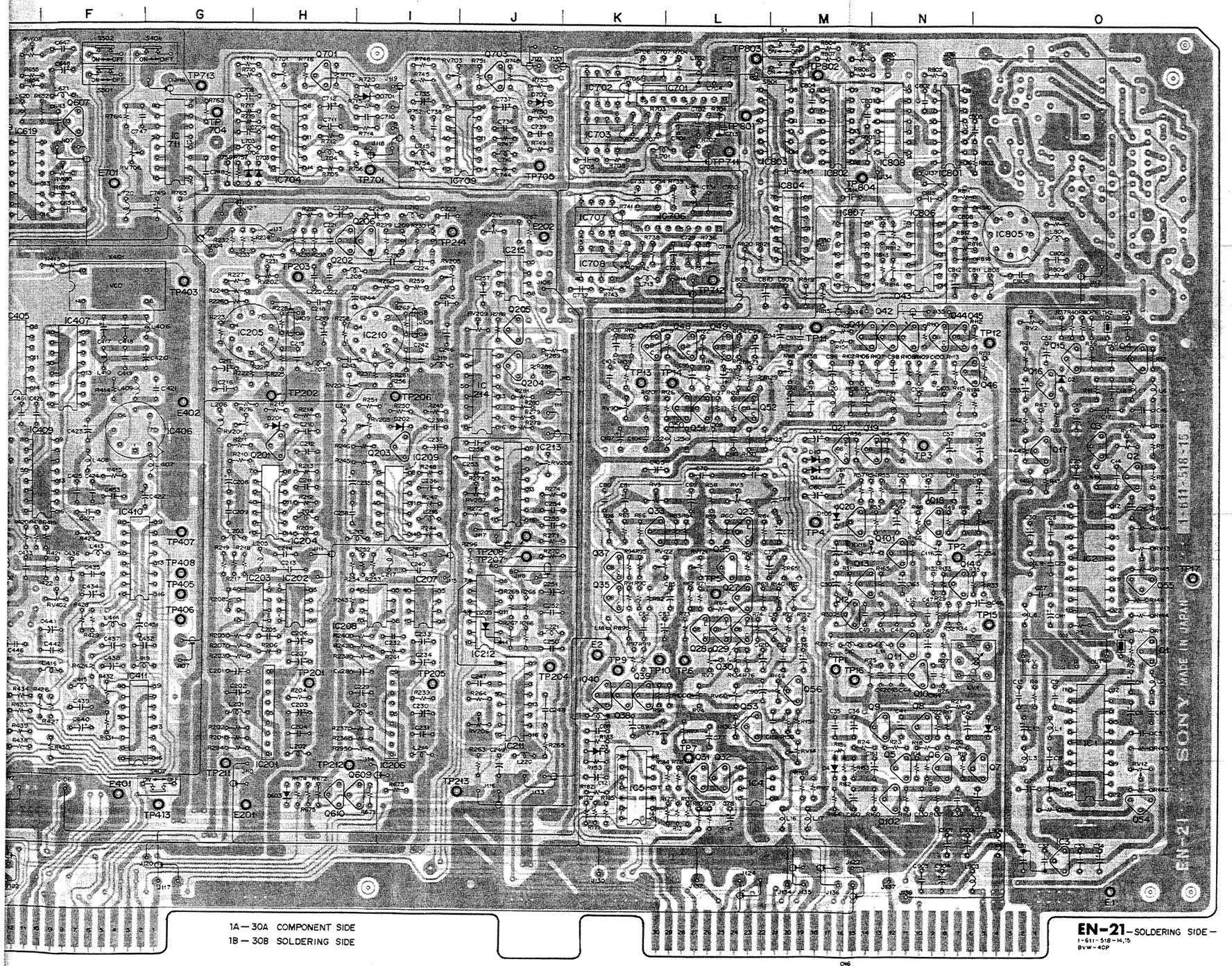
1-611-318-13,14,15

BVW-40P

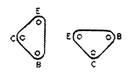
EN-21 EN-21

EN-21 (VIDEO ENCODER)

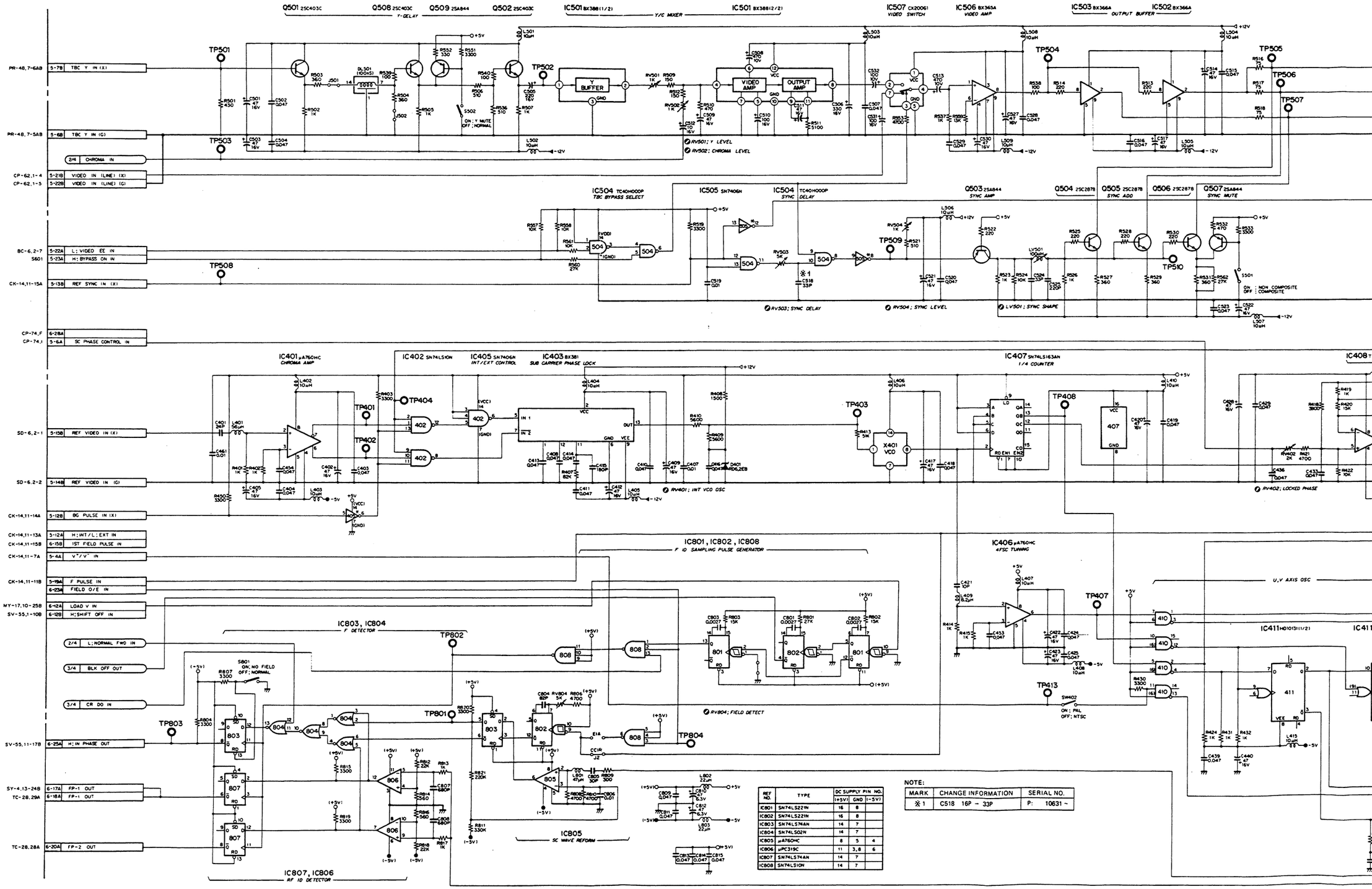




CV601	C - 2	Q1	O - 7	RV1	O - 5	TP603	B - 3
		Q2	O - 5	RV2	O - 3	TP604	B - 3
D1	O - 7	Q3	O - 5	RV3	L - 5	TP607	D - 1
D2	O - 4	Q4	O - 4	RV4	L - 7	TP608	D - 1
D3	K - 8	Q5	N - 8	RV5	K - 5	TP609	E - 2
D4	M - 8	Q6	N - 8	RV6	L - 7	TP610	C - 3
D10	M - 5	Q7	O - 8	RV7	L - 7	TP701	I - 2
D11	M - 5	Q8	N - 7	RV8	M - 4	TP704	G - 2
D105	M - 5	Q9	N - 7	RV9	K - 4	TP705	J - 2
D201	H - 4	Q10	N - 7	RV12	O - 8	TP711	L - 2
D202	I - 4	Q11	N - 7	RV13	O - 6	TP712	L - 3
D205	J - 6	Q12	M - 6	RV14	M - 8	TP713	G - 1
D401	E - 3	Q13	M - 6	RV16	M - 6	TP801	L - 1
D603	H - 8	Q14	N - 6	RV121	L - 6	TP802	M - 1
D701	I - 1	Q15	O - 4	RV122	L - 6	TP803	L - 1
D702	J - 1	Q16	O - 4	RV201	G - 4	TP804	M - 2
D703	H - 2	Q17	O - 5	RV202	H - 3		
D704	G - 2	Q18	N - 5	RV203	I - 4	X1	O - 7
		Q19	N - 5	RV204	H - 4	X401	F - 3
DL501	B - 7	Q20	M - 5	RV205	I - 3	X601	C - 2
		Q21	M - 5	RV206	J - 7		
E1	O - 9	Q33	L - 5	RV207	J - 5		
E2	K - 7	Q35	L - 6	RV208	J - 5		
E201	H - 8	Q37	L - 6	RV209	J - 3		
E202	J - 3	Q38	L - 6	RV210	J - 3		
E401	F - 8	Q39	L - 6	RV401	F - 3		
E402	G - 4	Q40	L - 6	RV402	F - 6		
E501	B - 9	Q41	L - 8	RV501	B - 6		
E502	A - 5	Q42	L - 8	RV502	B - 5		
E701	F - 2	Q43	K - 5	RV503	C - 7		
		Q45	K - 6	RV504	C - 7		
F601	C - 1	Q47	K - 6	RV602	A - 3		
		Q48	K - 7	RV603	B - 3		
IC1	O - 7	Q49	K - 7	RV607	C - 2		
IC2	O - 5	Q50	K - 7	RV608	E - 1		
IC3	O - 9	Q51	M - 3	RV609	D - 2		
IC4	L - 8	Q52	N - 3	RV610	F - 2		
IC5	K - 8	Q53	N - 3	RV701	H - 1		
IC201	H - 7	Q54	N - 3	RV703	I - 1		
IC202	H - 6	Q55	N - 3	RV706	F - 2		
IC203	H - 6	Q56	O - 4	RV804	M - 1		
IC204	H - 5	Q57	K - 4				
IC205	G - 3	Q58	L - 4	S1	M - 1		
IC206	I - 7	Q59	L - 4	S401	G - 1		
IC207	I - 6	Q60	L - 4	S402	G - 8		
IC208	I - 6	Q61	L - 4	S501	F - 1		
IC209	I - 5	Q62	L - 4	S502	F - 1		
IC210	I - 3	Q63	L - 7	S801	M - 1		
IC211	J - 7	Q64	O - 8				
IC212	J - 6	Q65	O - 6	TH1	O - 6		
IC213	J - 5	Q66	M - 7				
IC214	J - 4	Q101	N - 6	TP1	M - 7		
IC215	J - 3	Q102	N - 8	TP2	N - 6		
IC401	D - 6	Q201	H - 5	TP3	N - 5		
IC402	E - 5	Q202	H - 3	TP4	M - 5		
IC403	D - 3	Q203	I - 5	TP5	L - 6		
IC405	E - 4	Q204	J - 4	TP6	L - 7		
IC406	F - 4	Q205	J - 3	TP7	L - 8		
IC407	F - 4	Q206	I - 3	TP8	K - 7		
IC408	E - 5	Q601	B - 8	TP10	K - 7		
IC409	F - 5	Q602	A - 6	TP11	M - 3		
IC410	F - 6	Q603	C - 6	TP12	O - 3		
IC411	F - 7	Q604	C - 4	TP13	K - 4		
IC412	E - 7	Q605	C - 4	TP14	L - 4		
IC501	B - 5	Q606	C - 4	TP15	O - 6		
IC502	B - 4	Q607	C - 4	TP16	M - 7		
IC503	B - 4	Q608	B - 7	TP17	O - 6		
IC504	C - 8	Q609	A - 5	TP201	H - 7		
IC505	C - 8	Q801	A - 1	TP202	H - 4		
IC506	A - 4	Q802	B - 1	TP203	H - 3		
IC507	B - 4	Q805	B - 1	TP204	J - 7		
IC605	A - 2	Q807	F - 1	TP205	I - 7		
IC607	B - 2	Q808	E - 1	TP206	I - 4		
IC609	A - 2	Q809	H - 8	TP207	J - 6		
IC610	B - 2	Q810	H - 8	TP208	J - 5		
IC613	D - 1	Q701	H - 1	TP211	G - 8		
IC614	C - 2	Q703	J - 1	TP212	H - 8		
IC616	D - 2			TP213	J - 8		
IC617	D - 1			TP214	I - 8		
IC618	E - 2			TP401	D - 5		
IC619	E - 2			TP402	D - 5		
IC701	L - 1			TP403	G - 3		
IC702	K - 1			TP404	D - 5		
IC703	K - 2			TP405	G - 6		
IC704	H - 2			TP406	G - 6		
IC706	L - 2			TP407	G - 5		
IC707	K - 2			TP408	G - 6		
IC708	K - 3			TP409	E - 8		
IC709	J - 2			TP410	E - 8		
IC711	G - 2			TP411	D - 8		
IC801	N - 1			TP412	E - 8		
IC802	M - 1			TP413	G - 8		
IC803	M - 1			TP501	B - 8		
IC804	M - 2			TP502	A - 6		
IC805	O - 3			TP503	A - 5		
IC806	N - 3			TP504	A - 4		
IC807	M - 3			TP505	C - 3		
IC808	N - 1			TP506	C - 4		
				TP507	C - 4		
LV1	Q - 7			TP508	C - 8		
LV501	C - 6			TP509	C - 7		
LV601	E - 1			TP510	C - 5		



EN-21 (4/4) (VIDEO ENCODER)

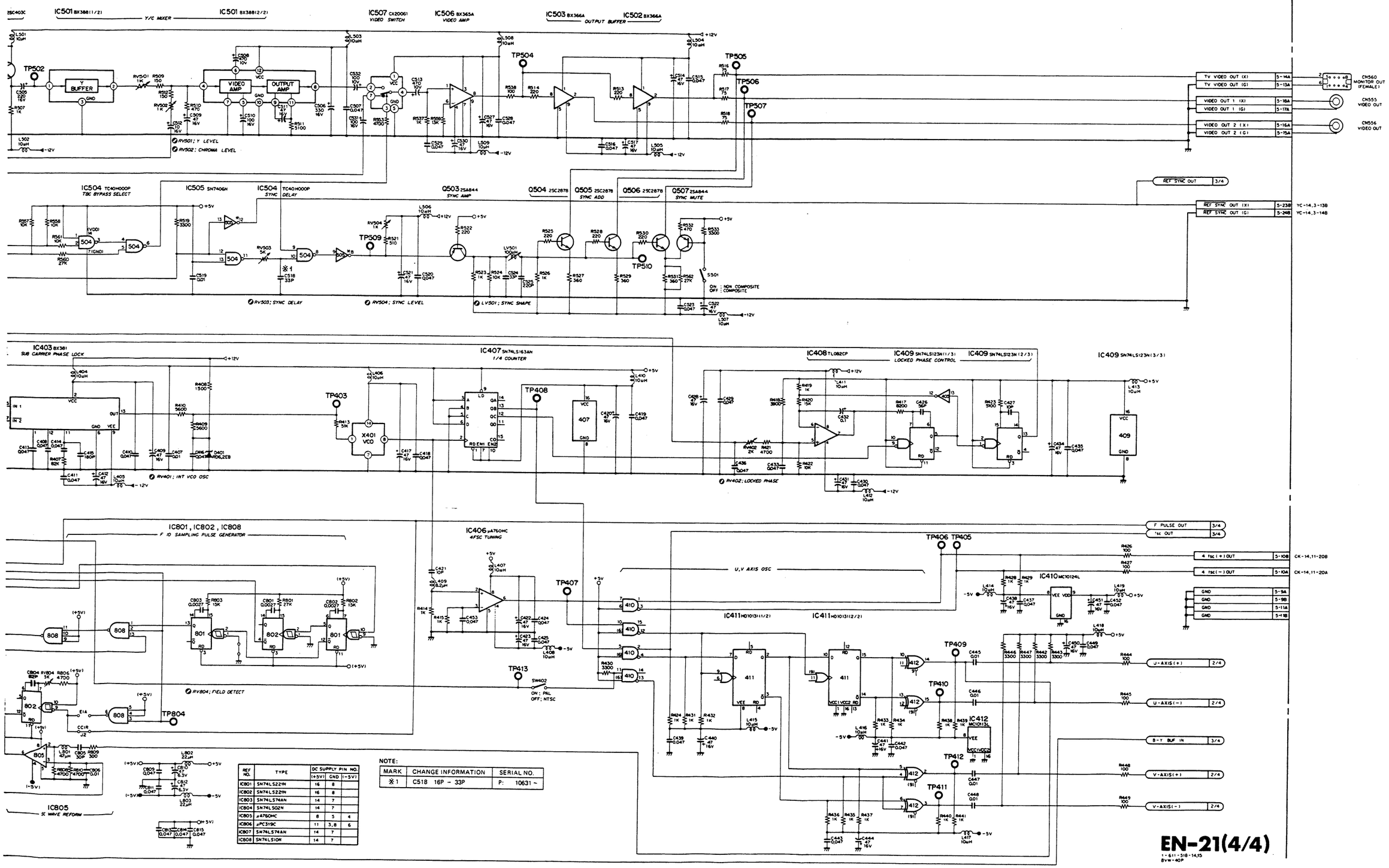


REF NO.	TYPE	DC SUPPLY PIN NO. (+5V)	GND	(-5V)
IC801	SN74LS221N	16	8	
IC802	SN74LS221N	16	8	
IC803	SN74LS74AN	14	7	
IC804	SN74LS02N	14	7	
IC805	μA760HC	8	5	4
IC806	μPC319C	11	3,8	6
IC807	SN74LS74AN	14	7	
IC808	SN74LS10N	14	7	

NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	C518 16P → 33P	P: 10631 ~

EN-21 (4/4)
EN-21 (4/4)



REF NO.	TYPE	DC SUPPLY PIN NO. (+5V)	GND	(−5V)
IC801	SN74LS221N	16	8	
IC802	SN74LS221N	16	8	
IC803	SN74LS74AN	14	7	
IC804	SN74LS02N	14	7	
IC805	μA760HC	8	5	4
IC806	μPC319C	11	3,8	6
IC807	SN74LS74AN	14	7	
IC808	SN74LS10N	14	7	

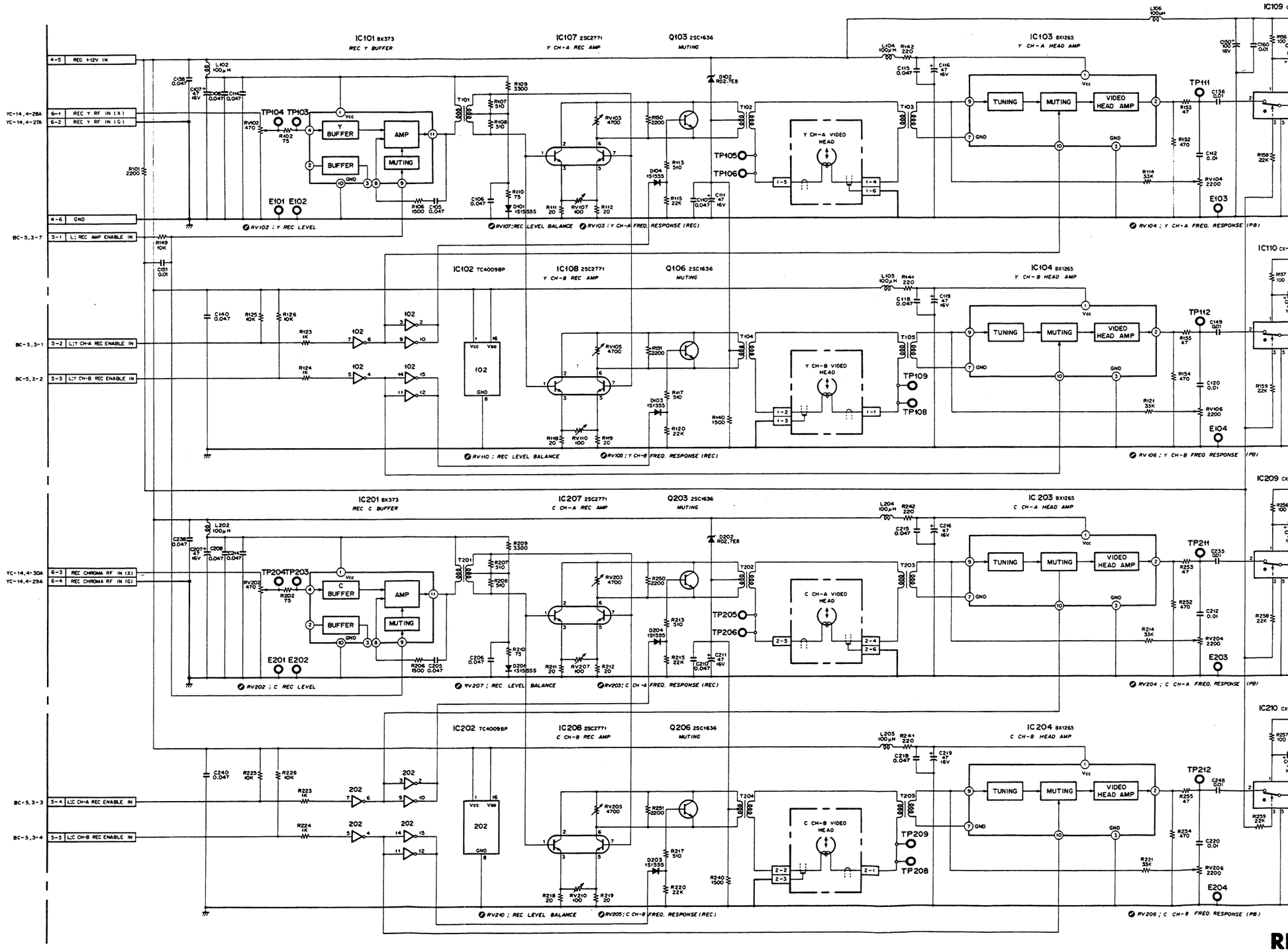
NOTE:

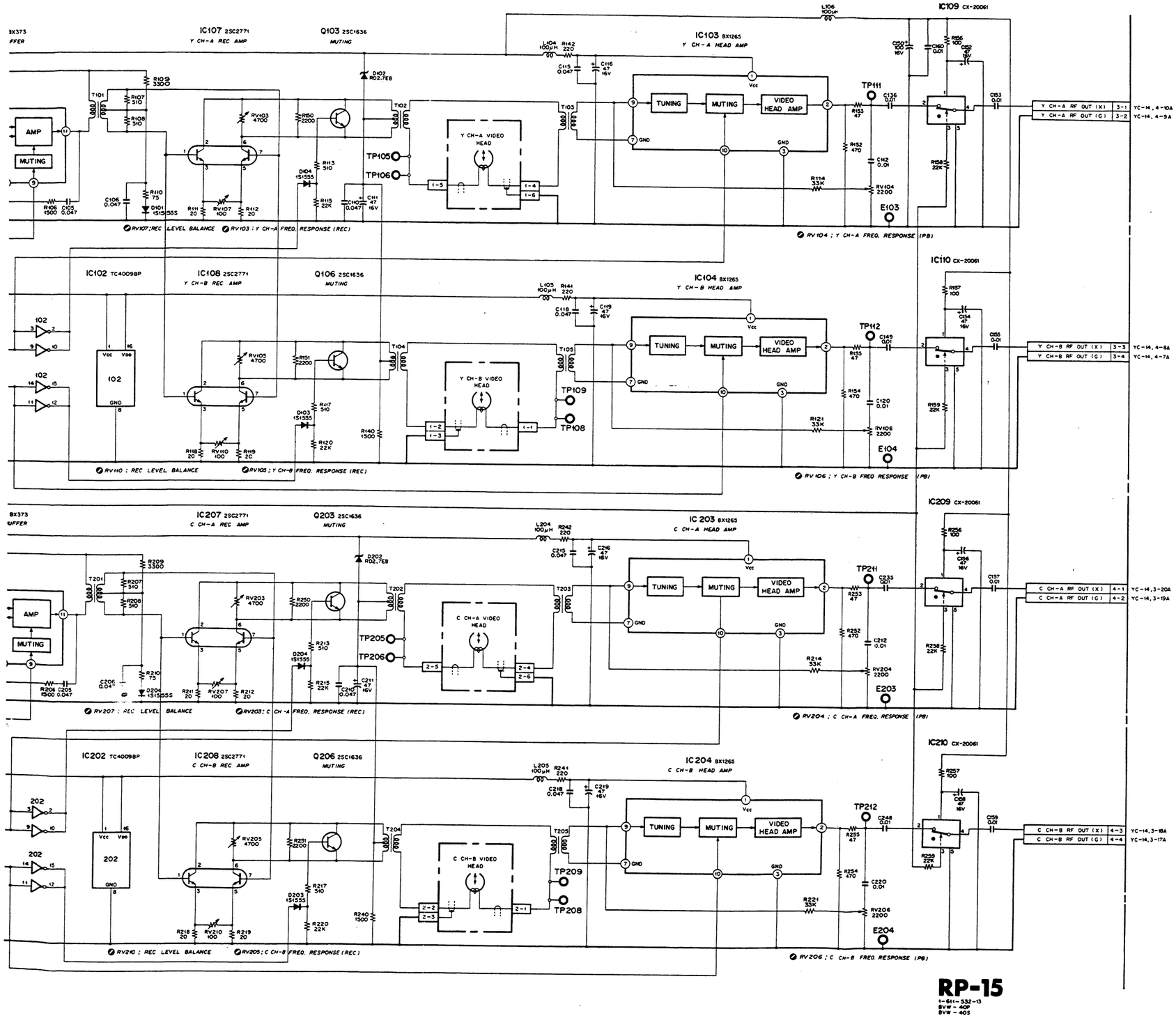
MARK	CHANGE INFORMATION	SERIAL NO.
※1	C518 16P → 33P	P: 10631 ~

EN-21(4/4)
1-611-318-14,15
BVW-40P

RP-15 RP-15

RP-15 (Y/C REC PB AMPLIFIER)

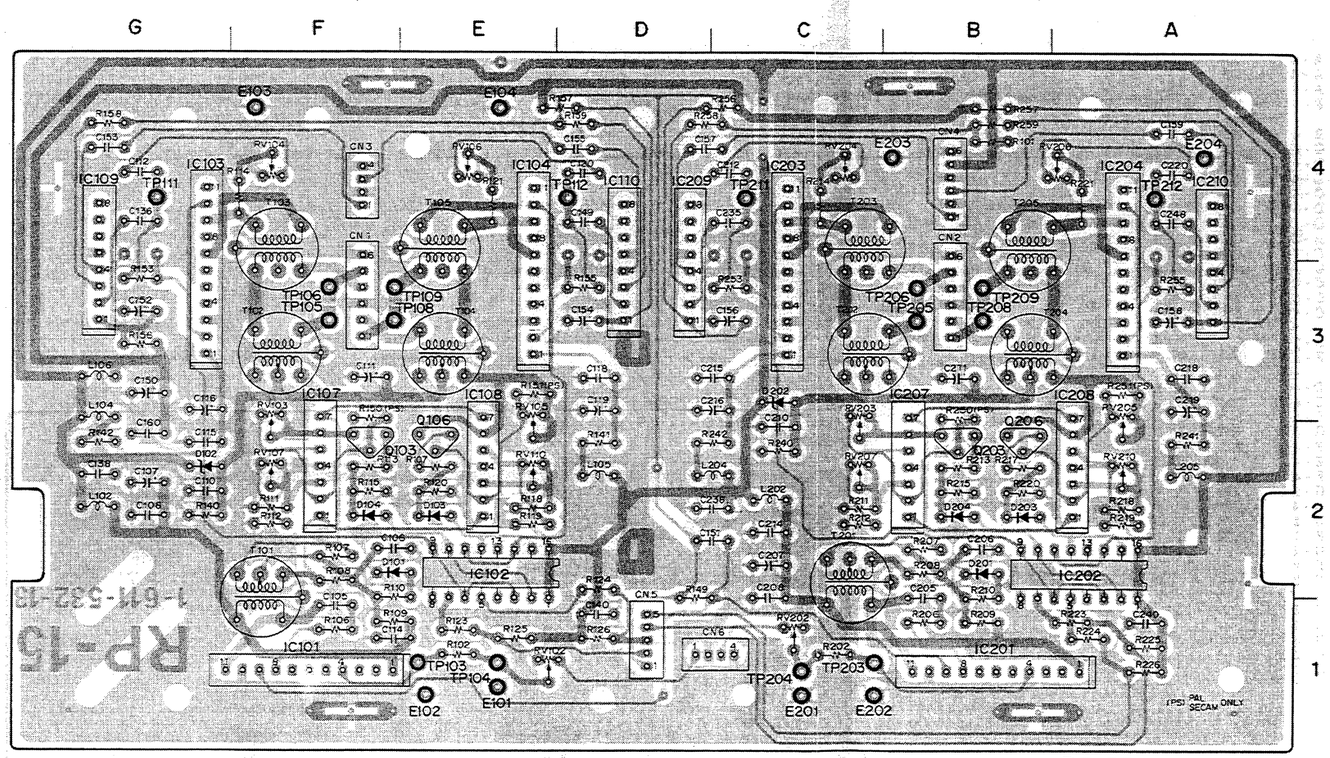




RP-15
1-611-332-13
BVW - 40P
BVW - 40S

RP-15 (Y/C REC PB AMPLIFIER)

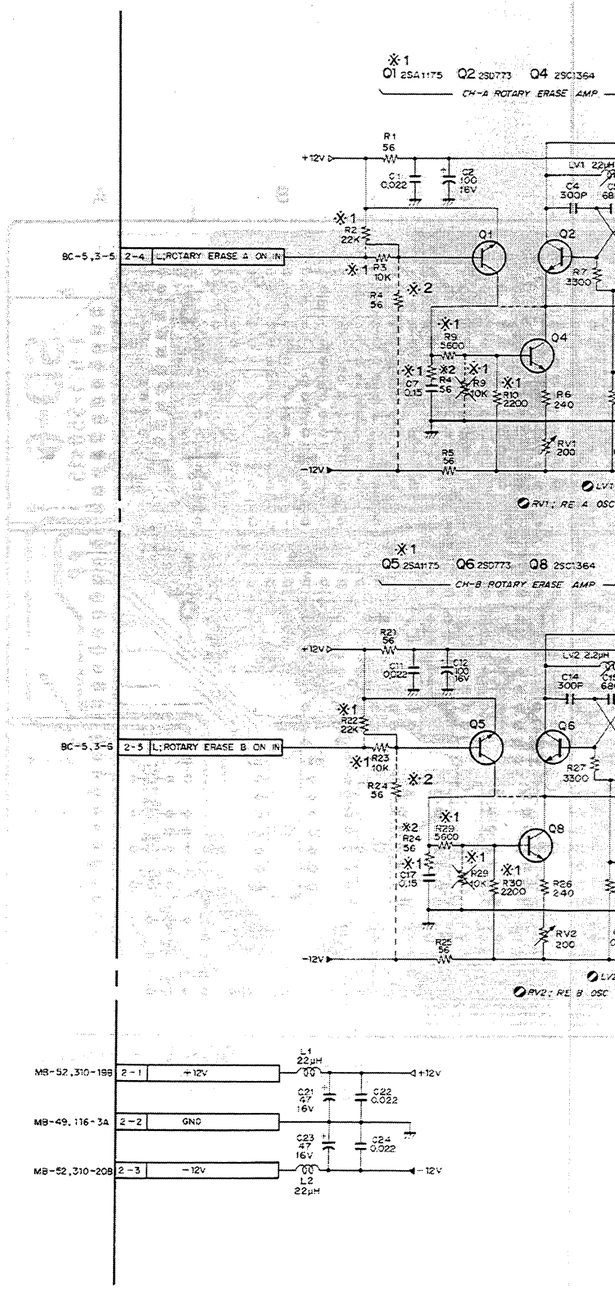
CN1	F - 3	RV102	E - 1
CN2	B - 3	RV103	F - 3
CN3	F - 4	RV104	F - 4
CN4	B - 4	RV105	E - 3
CN5	D - 1	RV106	E - 4
CN6	C - 1	RV107	F - 2
		RV110	E - 2
D101	F - 2	RV202	C - 1
D102	G - 2	RV203	C - 3
D103	E - 2	RV204	C - 4
D104	F - 2	RV205	A - 3
D201	B - 2	RV206	A - 4
D202	C - 3	RV207	C - 2
D203	B - 2	RV210	A - 2
D204	B - 2		
		T101	F - 1
E101	E - 1	T102	F - 3
E102	E - 1	T103	F - 4
E103	F - 4	T104	E - 3
E104	E - 4	T105	E - 4
E201	C - 1	T201	C - 2
E202	C - 1	T202	C - 3
E203	B - 4	T203	C - 4
E204	A - 4	T204	B - 3
		T205	B - 4
IC101	F - 1		
IC102	E - 2	TP103	E - 1
IC103	G - 3	TP104	E - 1
IC104	E - 3	TP105	F - 3
IC107	F - 2	TP106	F - 3
IC108	E - 2	TP108	F - 3
IC109	G - 4	TP109	F - 3
IC110	D - 4	TP111	G - 4
IC201	B - 1	TP112	D - 4
IC202	A - 2	TP203	C - 1
IC203	C - 3	TP204	C - 1
IC204	A - 3	TP205	B - 3
IC207	B - 2	TP206	B - 3
IC208	A - 2	TP208	B - 3
IC209	D - 4	TP209	B - 3
IC210	A - 4	TP211	C - 4
		TP212	A - 4
Q103	F - 2		
Q106	E - 2		
Q203	B - 2		
Q206	B - 2		

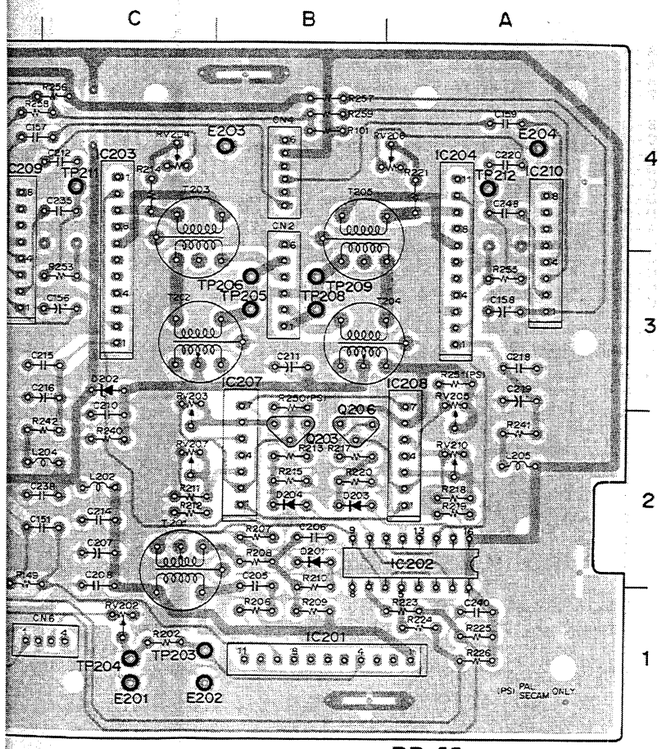


RP-15 – SOLDERING SIDE –

1-611-532-13
BVW-40P
BVW-40
BVW-40S

RE-10 (ROTARY ERASE AMPLIFIER)

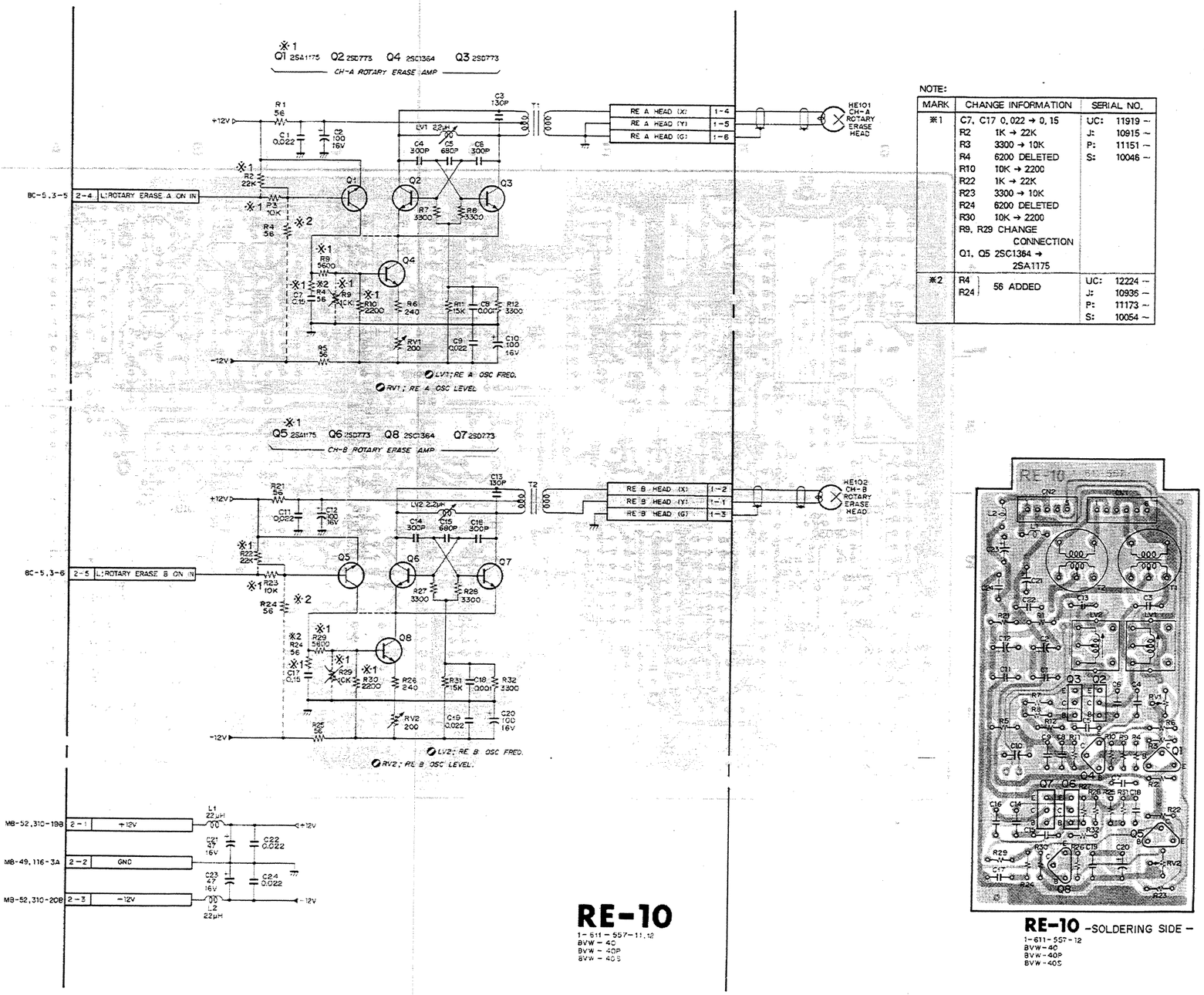




RP-15 – SOLDERING SIDE –

1-611-532-13
BVW-40P
BVW-40
BVW-40S

RE-10 (ROTARY ERASE AMPLIFIER)



NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	C7, C17 0.022 → 0.15	UC: 11919 ~
	R2 1K → 22K	J: 10915 ~
	R3 3300 → 10K	P: 11151 ~
	R4 6200 DELETED	S: 10046 ~
	R10 10K → 2200	
	R22 1K → 22K	
	R23 3300 → 10K	
	R24 6200 DELETED	
	R30 10K → 2200	
	R9, R29 CHANGE CONNECTION	
	Q1, Q5 2SC1364 → 2SA1175	
※2	R4, R24 56 ADDED	UC: 12224 ~
		J: 10936 ~
		P: 11173 ~
		S: 10054 ~

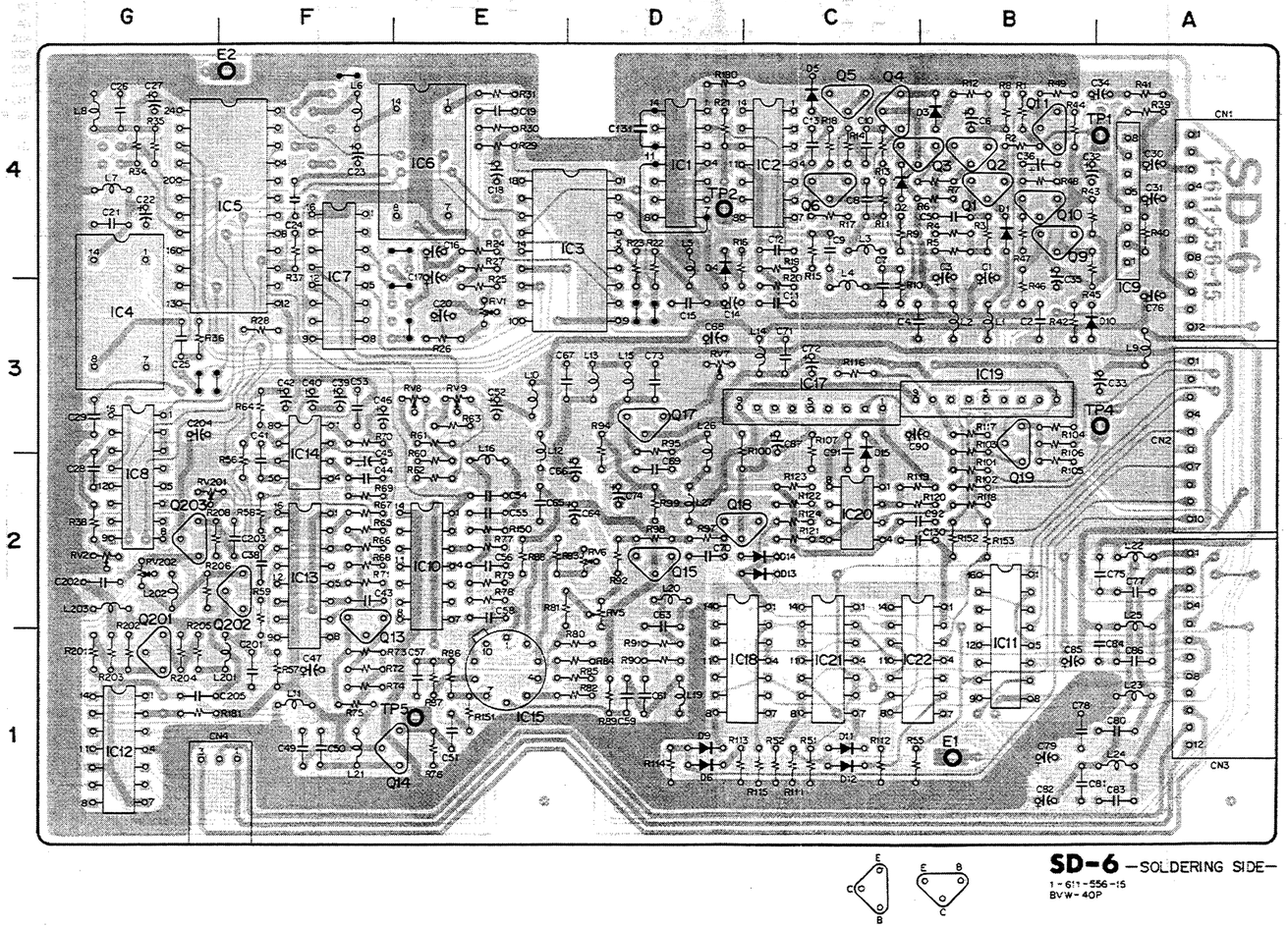
RE-10

1-611-557-11,12
BVW-40
BVW-40P
BVW-40S

RE-10 – SOLDERING SIDE –

1-611-557-12
BVW-40
BVW-40P
BVW-40S

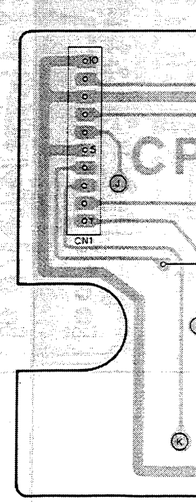
SD-6 (REFERENCE SIGNAL GENERATOR) **UP TO S/N 11040**
CP-62



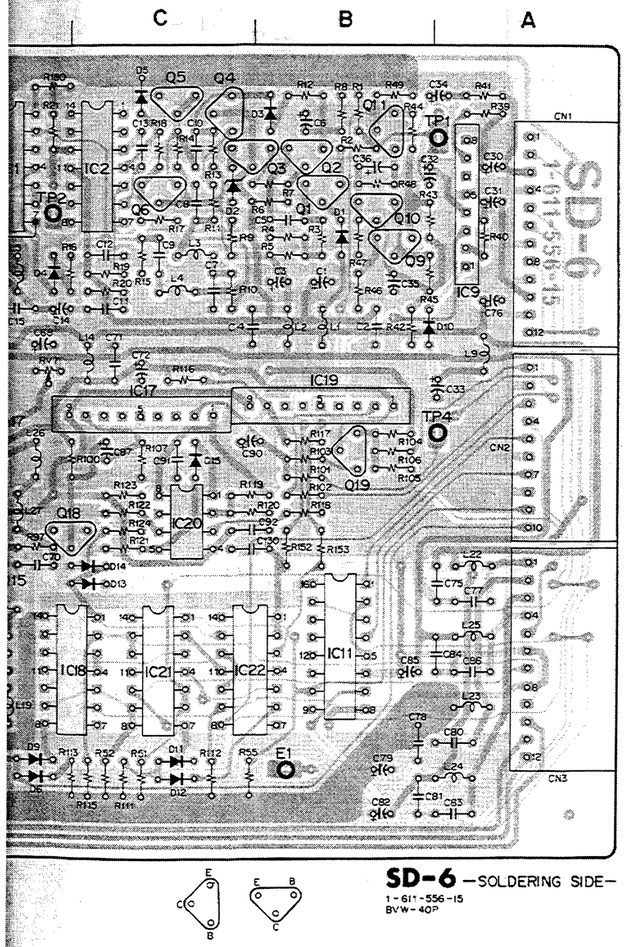
SD-6 —SOLDERING SIDE—
1-611-556-15
BVW-40P

CN1	A - 4	Q1	B - 4
CN2	A - 3	Q2	B - 4
CN3	A - 1	Q3	B - 4
CN4	F - 1	Q4	C - 4
		Q5	C - 4
D1	B - 4	Q6	C - 4
D2	C - 4	Q9	B - 4
D3	B - 4	Q10	B - 4
D4	D - 4	Q11	B - 4
D5	C - 4	Q13	F - 2
D6	D - 1	Q14	E - 1
D9	D - 1	Q15	D - 2
D10	A - 3	Q17	D - 3
D11	C - 1	Q18	D - 2
D12	C - 1	Q19	B - 2
D13	C - 2	Q201	G - 1
D14	C - 2	Q202	F - 2
D15	C - 2	Q203	G - 2
E1	B - 1	RV1	E - 3
E2	F - 4	RV2	G - 2
		RV5	D - 2
IC1	D - 4	RV6	D - 2
IC2	C - 4	RV7	D - 3
IC3	D - 4	RV8	E - 3
IC4	G - 3	RV9	E - 3
IC5	F - 4	RV201	G - 2
IC6	E - 4	RV202	G - 2
IC7	F - 4		
IC8	G - 2	TP1	A - 4
IC9	A - 4	TP2	D - 4
IC10	E - 2	TP4	A - 3
IC11	B - 1	TP5	E - 1
IC12	G - 1		
IC13	F - 2		
IC14	F - 2		
IC15	E - 1		
IC17	C - 3		
IC18	C - 1		
IC19	B - 3		
IC20	C - 2		
IC21	C - 1		
IC22	B - 1		

SD-6, CP-62

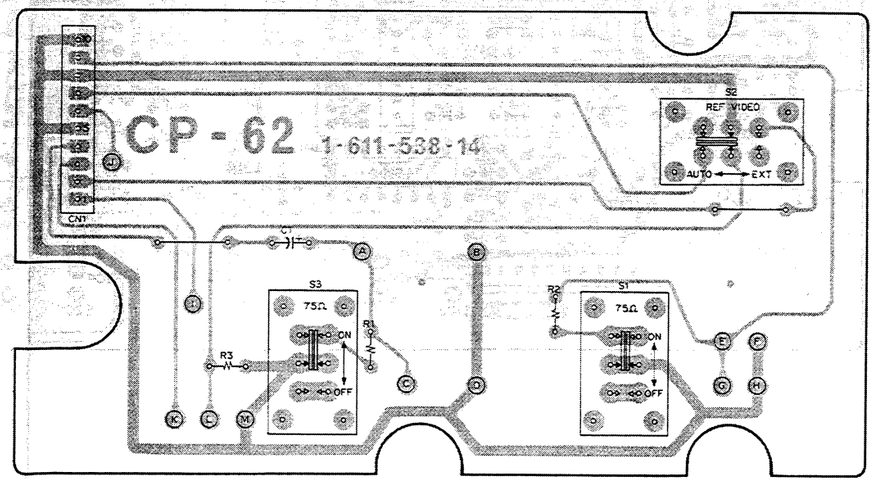


SD-6, CP-62



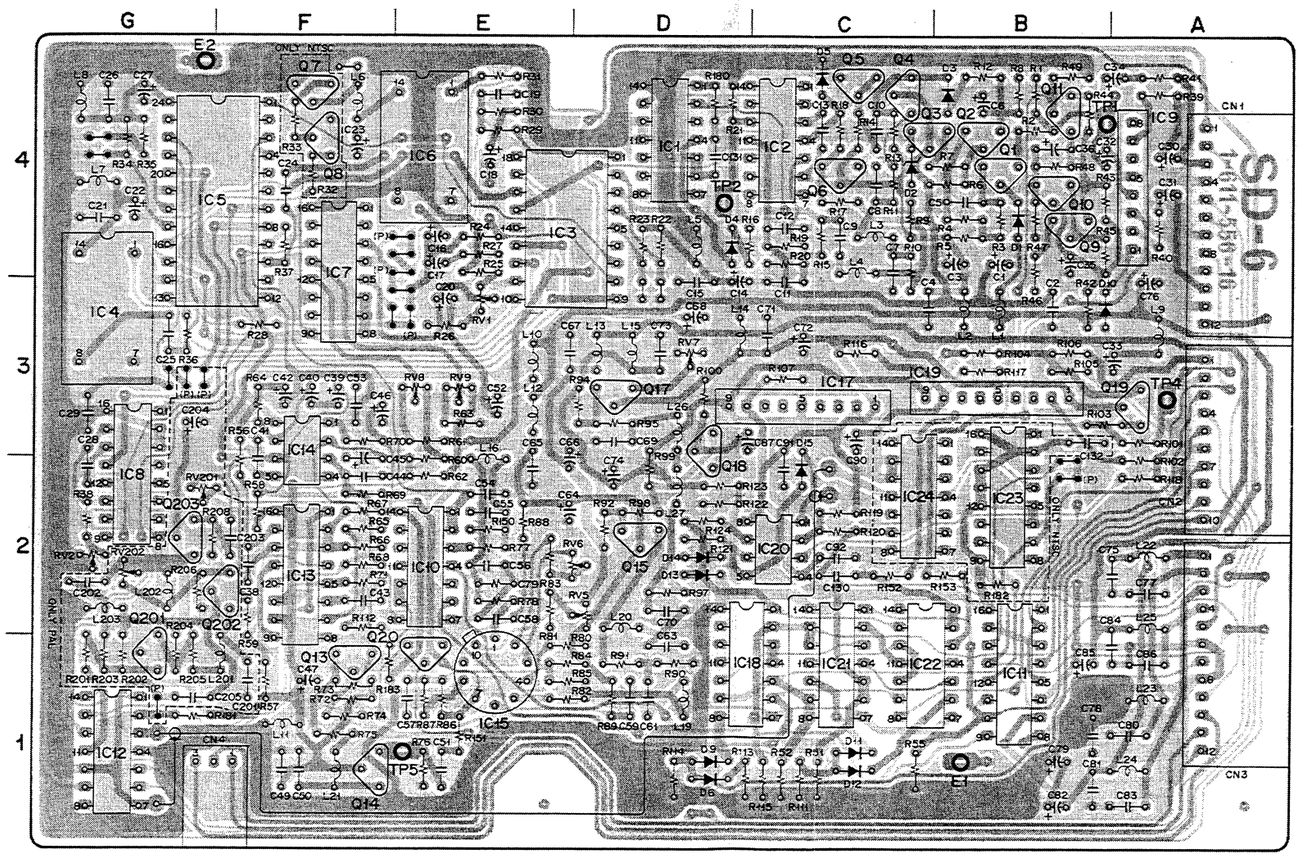
SD-6 –SOLDERING SIDE–
1-611-556-15
BVW-40P

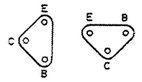
CN1	A - 4	Q1	B - 4
CN2	A - 3	Q2	B - 4
CN3	A - 1	Q3	B - 4
CN4	F - 1	Q4	C - 4
		Q5	C - 4
D1	B - 4	Q6	C - 4
D2	C - 4	Q9	B - 4
D3	B - 4	Q10	B - 4
D4	D - 4	Q11	B - 4
D5	C - 4	Q13	F - 2
D6	D - 1	Q14	E - 1
D9	D - 1	Q15	D - 2
D10	A - 3	Q17	D - 3
D11	C - 1	Q18	D - 2
D12	C - 1	Q19	B - 2
D13	C - 2	Q201	G - 1
D14	C - 2	Q202	F - 2
D15	C - 2	Q203	G - 2
E1	B - 1	RV1	E - 3
E2	F - 4	RV2	G - 2
		RV5	D - 2
IC1	D - 4	RV6	D - 2
IC2	C - 4	RV7	D - 3
IC3	D - 4	RV8	E - 3
IC4	G - 3	RV9	E - 3
IC5	F - 4	RV201	G - 2
IC6	E - 4	RV202	G - 2
IC7	F - 4		
IC8	G - 2	TP1	A - 4
IC9	A - 4	TP2	D - 4
IC10	E - 2	TP4	A - 3
IC11	B - 1	TP5	E - 1
IC12	G - 1		
IC13	F - 2		
IC14	F - 2		
IC15	E - 1		
IC17	C - 3		
IC18	C - 1		
IC19	B - 3		
IC20	C - 2		
IC21	C - 1		
IC22	B - 1		



CP-62 –SOLDERING SIDE–
1-611-538-14
BVW-40
BVW-40P
BVW-40S

SD-6 (REFERENCE SIGNAL GENERATOR) S/N 11041 AND LATER
CP-62

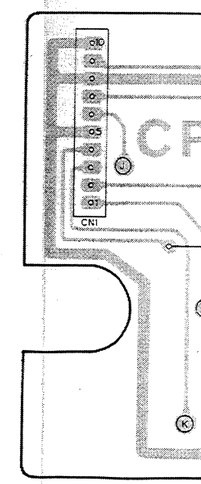




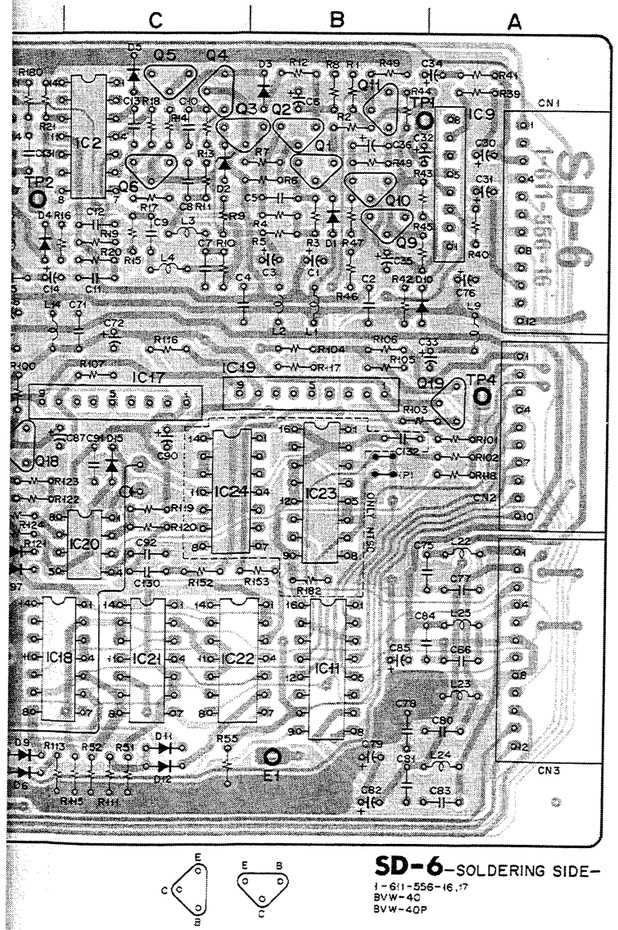
SD-6–SOLDERING SIDE–
1-611-556-16, 17
BVW-40
BVW-40P

CN1	A - 4	Q1	B - 4
CN2	A - 2	Q2	B - 4
CN3	A - 1	Q3	B - 4
CN4	F - 1	Q4	C - 4
		Q5	C - 4
D1	B - 4	Q6	C - 4
D2	C - 4	Q7	F - 4
D3	B - 4	Q8	F - 4
D4	D - 4	Q9	B - 4
D5	C - 4	Q10	B - 4
D6	D - 1	Q11	B - 4
D9	D - 1	Q13	F - 1
D10	B - 4	Q14	F - 1
D11	C - 1	Q15	D - 2
D12	C - 1	Q17	D - 3
D13	D - 2	Q18	D - 2
D14	D - 2	Q19	A - 3
D15	C - 2	Q20	E - 1
		Q201	G - 1
E1	B - 1	Q202	F - 2
E2	G - 4	Q203	G - 2
IC1	D - 4	RV1	E - 3
IC2	C - 4	RV2	G - 2
IC3	E - 4	RV5	D - 2
IC4	G - 3	RV6	D - 2
IC5	F - 4	RV7	D - 3
IC6	E - 4	RV8	E - 3
IC7	F - 4	RV9	E - 3
IC8	G - 2	RV201	G - 2
IC9	A - 4	RV202	G - 2
IC10	E - 2		
IC11	B - 1	TP1	B - 4
IC12	G - 1	TP2	D - 4
IC13	F - 2	TP4	A - 3
IC14	F - 3	TP5	E - 1
IC15	E - 1		
IC17	C - 3		
IC18	D - 1		
IC19	B - 3		
IC20	C - 2		
IC21	C - 1		
IC22	C - 1		
IC23	B - 2		
IC24	C - 2		

SD-6, CP-62



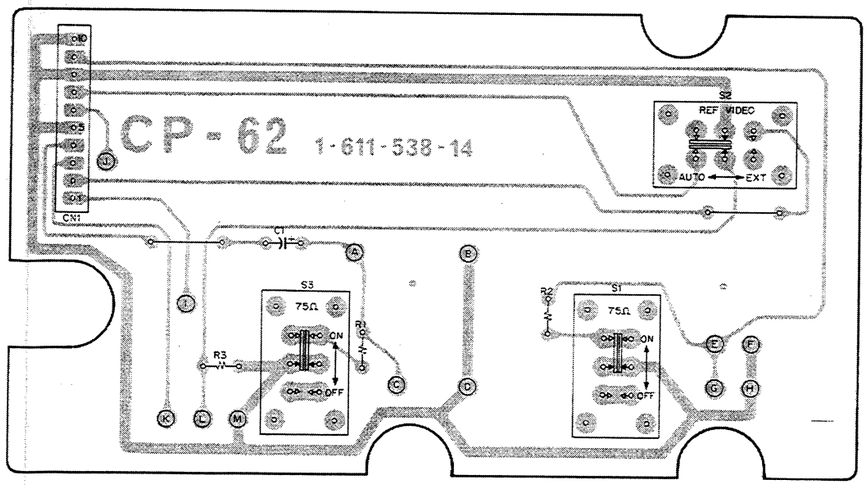
SD-6, CP-62



CN1	A - 4	Q1	B - 4
CN2	A - 2	Q2	B - 4
CN3	A - 1	Q3	B - 4
CN4	F - 1	Q4	C - 4
		Q5	C - 4
D1	B - 4	Q6	C - 4
D2	C - 4	Q7	F - 4
D3	B - 4	Q8	F - 4
D4	D - 4	Q9	B - 4
D5	C - 4	Q10	B - 4
D6	D - 1	Q11	B - 4
D9	D - 1	Q13	F - 1
D10	B - 4	Q14	F - 1
D11	C - 1	Q15	D - 2
D12	C - 1	Q17	D - 3
D13	D - 2	Q18	D - 2
D14	D - 2	Q19	A - 3
D15	C - 2	Q20	E - 1
		Q201	G - 1
E1	B - 1	Q202	F - 2
E2	G - 4	Q203	G - 2
IC1	D - 4	RV1	E - 3
IC2	C - 4	RV2	G - 2
IC3	E - 4	RV5	D - 2
IC4	G - 3	RV6	D - 2
IC5	F - 4	RV7	D - 3
IC6	E - 4	RV8	E - 3
IC7	F - 4	RV9	E - 3
IC8	G - 2	RV201	G - 2
IC9	A - 4	RV202	G - 2
IC10	E - 2		
IC11	B - 1	TP1	B - 4
IC12	G - 1	TP2	D - 4
IC13	F - 2	TP4	A - 3
IC14	F - 3	TP5	E - 1
IC15	E - 1		
IC17	C - 3		
IC18	D - 1		
IC19	B - 3		
IC20	C - 2		
IC21	C - 1		
IC22	C - 1		
IC23	B - 2		
IC24	C - 2		

SD-6 –SOLDERING SIDE–

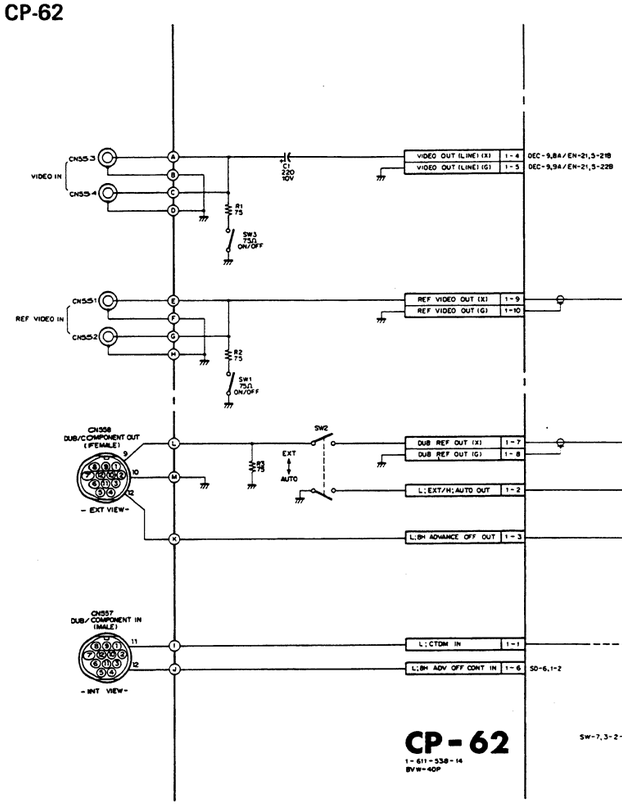
1-611-556-16,17
BVW-40
BVW-40P

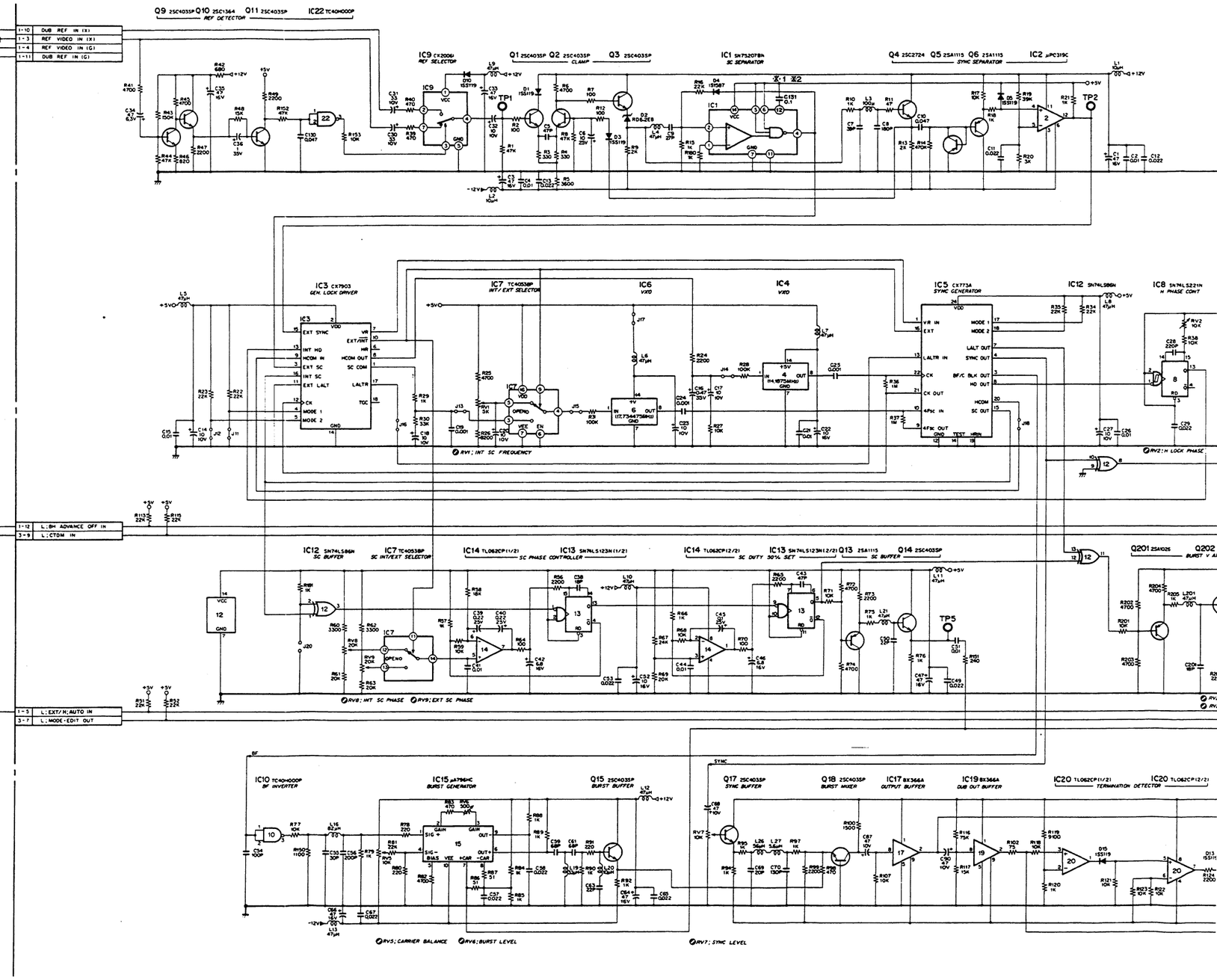


CP-62 –SOLDERING SIDE–

1-611-538-14
BVW-40
BVW-40P
BVW-40S

SD-6 (REFERENCE SIGNAL GENERATOR)
CP-62

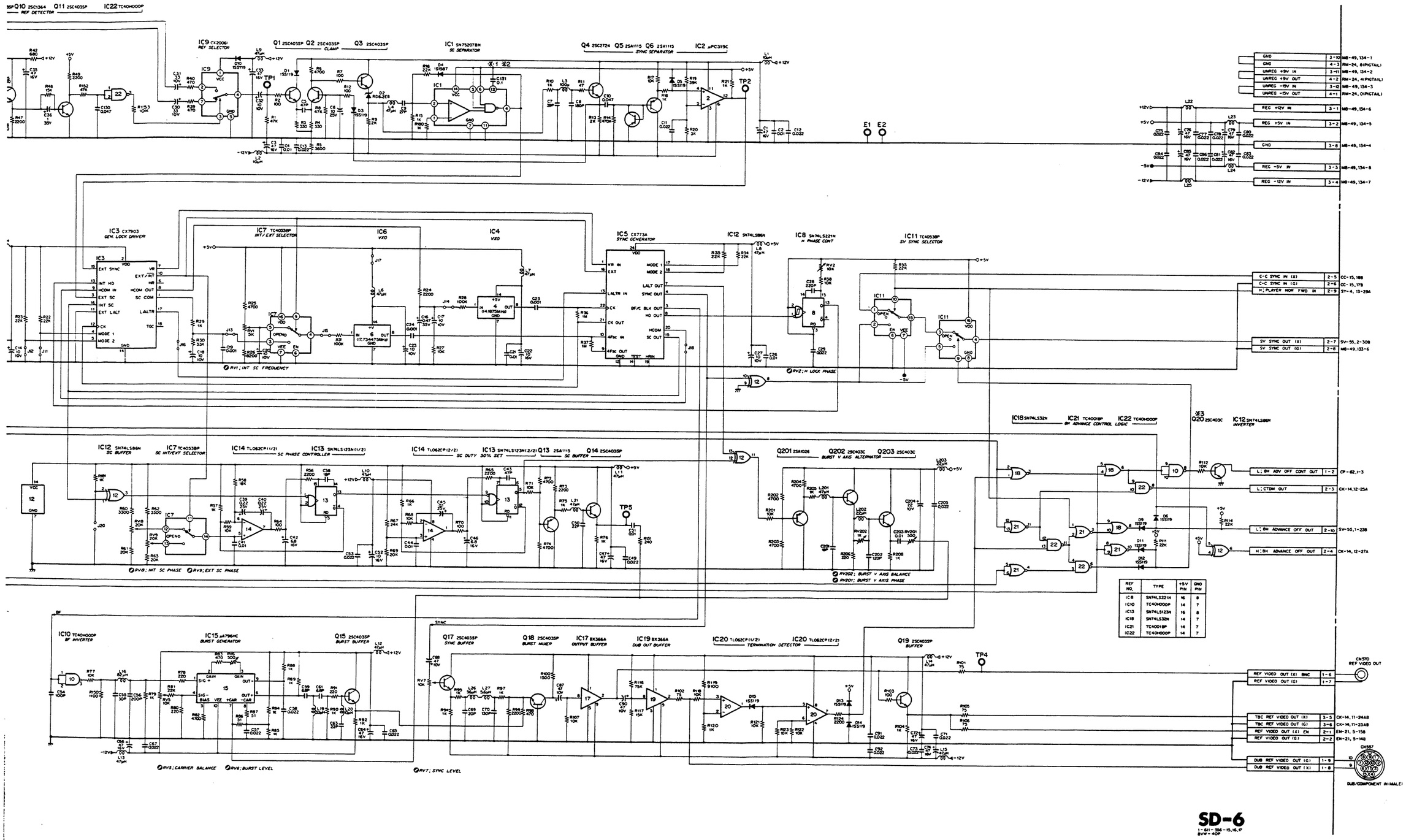




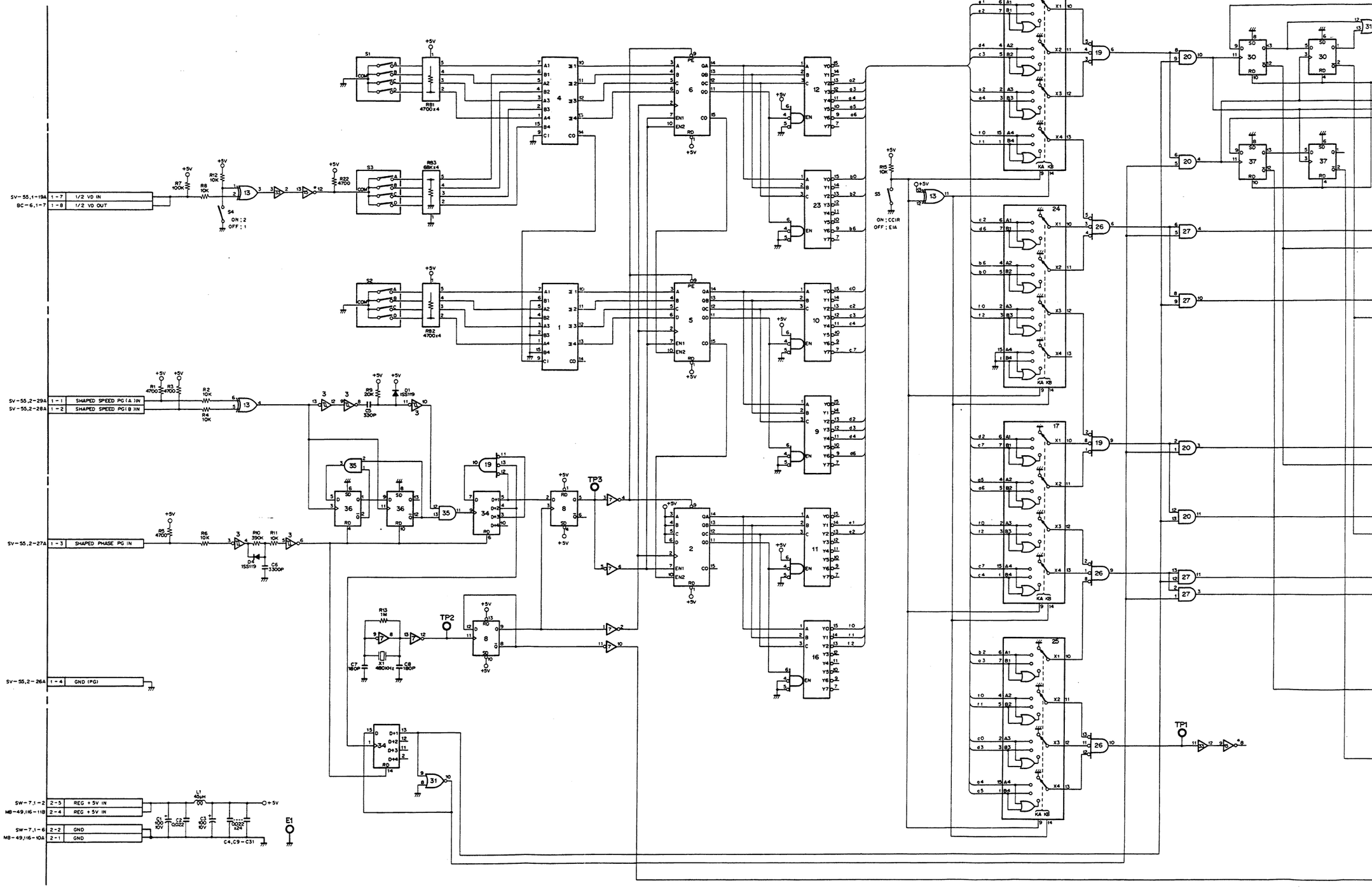
NOTE:

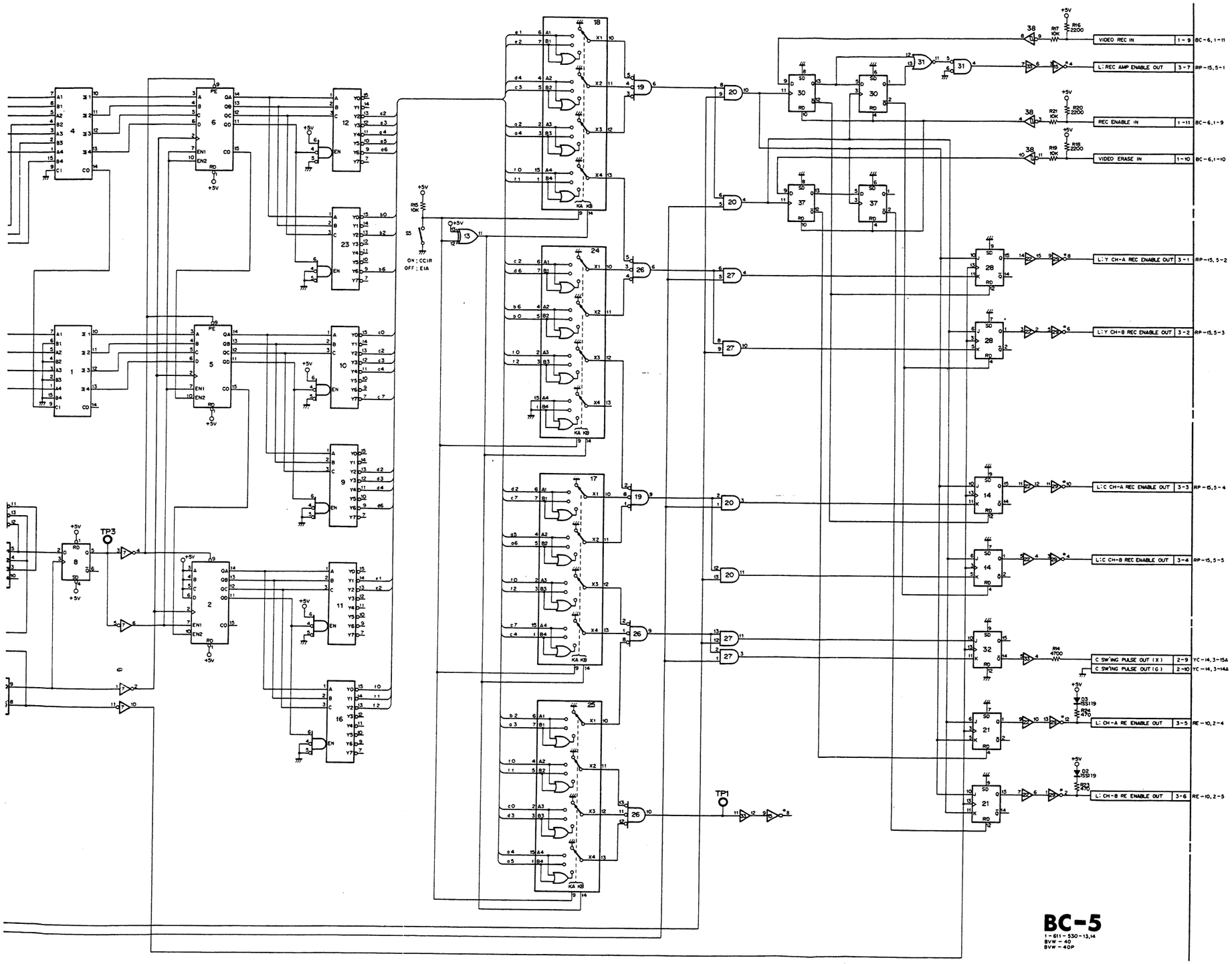
MARK	CHANGE INFORMATION	SERIAL NO.
※1	C131 0.001 ADDED	P: 10481 ~
※2	C131 0.001 → 0.1	P: 10891 ~
※3	Q20 2SC403C ADDED	P: 11041 ~

SD-6, CP-62


Q10 2SC1364 Q11 2SC4035P IC22 TC40H000P
REF DETECTOR
IC9 CX20061 REF SELECTOR
Q1 2SC4035P Q2 2SC4035P Q3 2SC4035P CLAMP
IC1 SN75307BN SC SEPARATOR
Q4 2SC2724 Q5 2SA1115 Q6 2SA1115 SYNC SEPARATOR
IC2 μPC319C
X-1 X2
TP1
TP2
E1 E2
IC3 CX7903 GEN. LOCK DRIVER
IC7 TC4053BP INT./EXT SELECTOR
IC6 VCO
IC4 VCO
IC5 CX773A SYNC GENERATOR
IC12 SN74LS86N
IC8 SN74LS221N H PHASE CONT
IC11 TC4053BP 5V SYNC SELECTOR
RV1; INT SC FREQUENCY
RV2; H LOCK PHASE
IC12 SN74LS86N SC BUFFER
IC7 TC4053BP SC INT/EXT SELECTOR
IC14 TL062CP(1/2) SC PHASE CONTROLLER
IC13 SN74LS123N(1/2)
IC14 TL062CP(2/2) SC DUTY 50% SET
IC13 SN74LS123N(2/2)
Q13 2SA1115 Q14 2SC4035P SC BUFFER
RV8; INT. SC PHASE RV9; EXT SC PHASE
Q201 2SA1026 Q202 2SC403C Q203 2SC403C BURST V AXIS ALTERNATOR
RV202; BURST V AXIS BALANCE
RV201; BURST V AXIS PHASE
IC18 SN74LS32N IC21 TC4001BP IC22 TC40H000P BH ADVANCE CONTROL LOGIC
X3
Q20 2SC403C IC12 SN74LS86N INVERTER
IC10 TC40H000P BF INVERTER
IC15 μPA796HC BURST GENERATOR
Q15 2SC4035P BURST BUFFER
RV5; CARRIER BALANCE RV6; BURST LEVEL
Q17 2SC4035P SYNC BUFFER
Q18 2SC4035P BURST MIXER
IC17 BX366A OUTPUT BUFFER
IC19 BX366A DUB OUT BUFFER
IC20 TL062CP(1/2) TERMINATION DETECTOR
IC20 TL062CP(2/2)
Q19 2SC4035P BUFFER
RV7; SYNC LEVEL
GND
UNREG +9V IN
UNREG +9V OUT
UNREG -5V IN
UNREG -5V OUT
REG +12V IN
REG +5V IN
REG -5V IN
REG -12V IN
C-C SYNC IN (X)
C-C SYNC IN (G)
H; PLAYER NOR FWD IN
5V SYNC OUT (X)
5V SYNC OUT (G)
L; BH ADV OFF CONT OUT
L; CTDM OUT
L; BH ADVANCE OFF OUT
H; BH ADVANCE OFF OUT
REF VIDEO OUT (X) BNC
REF VIDEO OUT (G)
TBC REF VIDEO OUT (X)
TBC REF VIDEO OUT (G)
REF VIDEO OUT (X) EN
REF VIDEO OUT (G)
DUB REF VIDEO OUT (G)
DUB REF VIDEO OUT (X)
CN570 REF VIDEO OUT
CN557P DUB/COMPONENT IN (MALE)
REF NO. | TYPE | +5V PIN | GND PIN
IC8 | SN74LS221N | 16 | 8
IC10 | TC40H000P | 14 | 7
IC13 | SN74LS123N | 16 | 8
IC18 | SN74LS32N | 14 | 7
IC21 | TC4001BP | 14 | 7
IC22 | TC40H000P | 14 | 7
SD-6
1 - 611 - 356 - 15, 16, 17
8VW - 40P

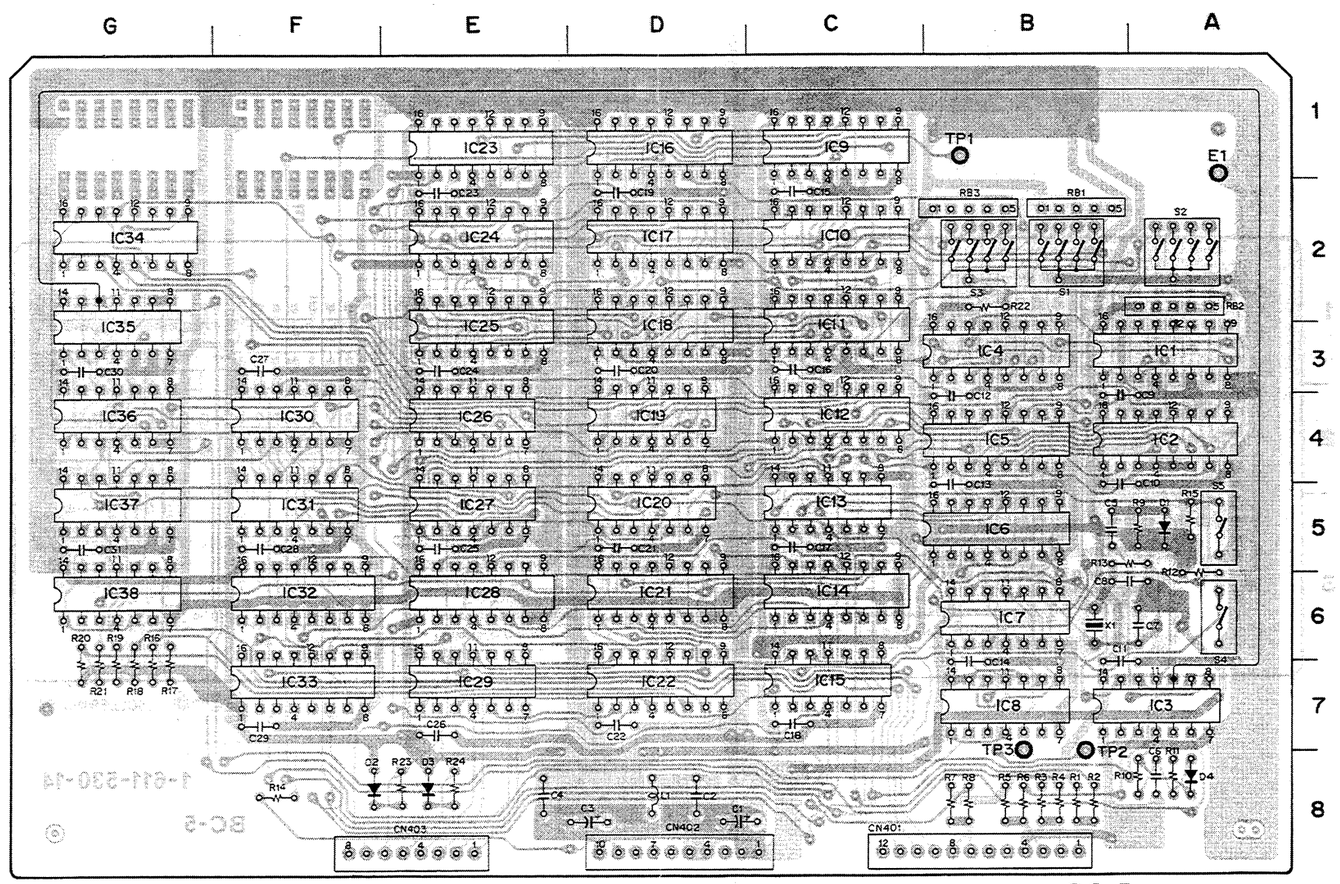
BC-5 (VIDEO BLANKING SWITCHER)




VIDEO REC IN 1-9 BC-6, 1-11
L: REC AMP ENABLE OUT 3-7 RP-15, 5-1
REC ENABLE IN 1-11 BC-6, 1-9
VIDEO ERASE IN 1-10 BC-6, 1-10
L: Y CH-A REC ENABLE OUT 3-1 RP-15, 5-2
L: Y CH-B REC ENABLE OUT 3-2 RP-15, 5-3
L: C CH-A REC ENABLE OUT 3-3 RP-15, 5-4
L: C CH-B REC ENABLE OUT 3-4 RP-15, 5-5
C SWING PULSE OUT (X) 2-9 YC-14, 3-15A
C SWING PULSE OUT (G) 2-10 YC-14, 3-14A
L: CH-A RE ENABLE OUT 3-5 RE-10, 2-4
L: CH-B RE ENABLE OUT 3-6 RE-10, 2-5
ON: CCIR
OFF: EIA
TP1
TP3
BC-5
1-611-530-13,14
BVW-40
BVW-40P

BC-5 (VIDEO BLANKING SWITCHER)

CN401	B - 8	RB1	B - 2
CN402	D - 8	RB2	A - 2
CN403	E - 8	RB3	B - 2
D1	A - 5	S1	B - 2
D2	F - 8	S2	A - 2
D3	E - 8	S3	B - 2
D4	A - 8	S4	A - 6
		S5	A - 5
E1	A - 1		
		TP1	B - 1
IC1	A - 3	TB2	B - 7
IC2	A - 4	TB3	B - 7
IC3	A - 7		
IC4	B - 3	X1	B - 6
IC5	B - 4		
IC6	B - 5		
IC7	B - 6		
IC8	B - 7		
IC9	C - 1		
IC10	C - 2		
IC11	C - 3		
IC12	C - 4		
IC13	C - 5		
IC14	C - 6		
IC15	C - 7		
IC16	D - 1		
IC17	D - 2		
IC18	D - 3		
IC19	D - 4		
IC20	D - 5		
IC21	D - 6		
IC22	D - 7		
IC23	E - 1		
IC24	E - 2		
IC25	E - 3		
IC26	E - 4		
IC27	E - 5		
IC28	E - 6		
IC29	E - 7		
IC30	F - 4		
IC31	F - 5		
IC32	F - 6		
IC33	F - 7		
IC34	G - 2		
IC35	G - 3		
IC36	G - 4		
IC37	G - 5		
IC38	G - 6		



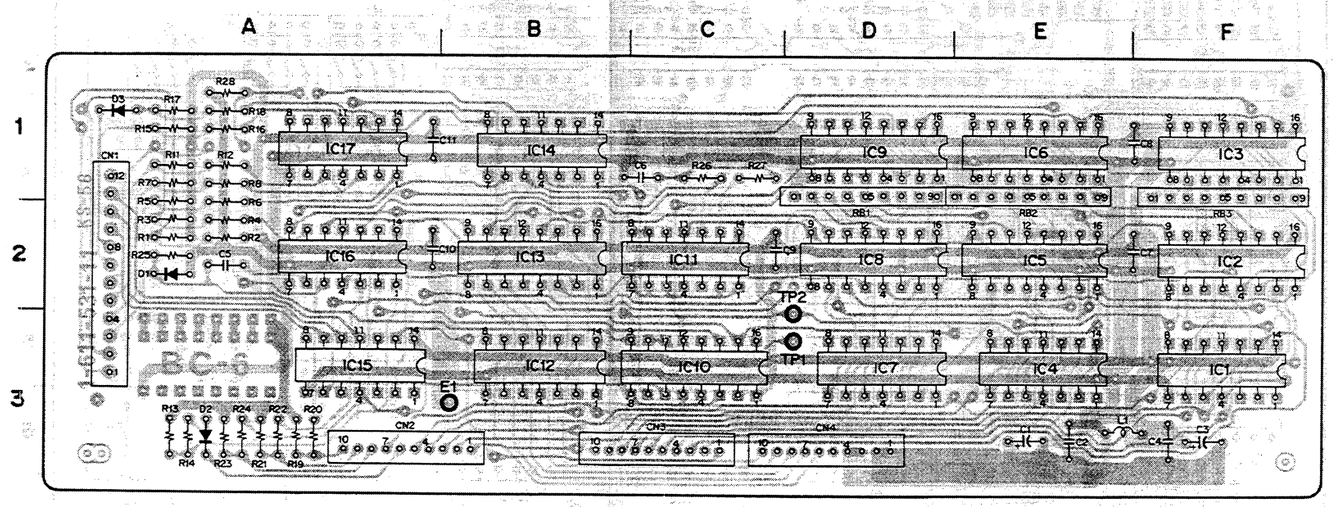
BC-5 –COMPONENT SIDE–

1-611-530-14
BVW-40
BVW-40P
BVW-40S

Ref. No.	Type	Pin No. +5V	Pin No. GND
IC 1	TC4008BP	16	8
IC 2	TC40H161P	16	8
IC 3	MC14584BCP	14	7
IC 4	TC4008BP	16	8
IC 5	TC40H161P	16	8
IC 6	TC40H161P	16	8
IC 7	TC40H004P	14	7
IC 8	TC40H074P	14	7
IC 9	TC40H138P	16	8
IC 10	TC40H138P	16	8
IC 11	TC40H138P	16	8
IC 12	TC40H138P	16	8
IC 13	TC4030BP	14	7
IC 14	TC4027BP	16	8
IC 15	SN7406N	14	7
IC 16	TC40H138P	16	8
IC 17	TC4019BP	16	8
IC 18	TC4019BP	16	8
IC 19	TC4025BP	14	7
IC 20	TC4081BP	14	7
IC 21	TC4027BP	16	8
IC 22	TC4050BP	1	8
IC 23	TC40H138P	16	8
IC 24	TC4019BP	16	8
IC 25	TC4019BP	16	8
IC 26	TC4025BP	14	7
IC 27	TC4081BP	14	7
IC 28	TC4027BP	16	8
IC 29	SN7406N	14	7
IC 30	TC4013BP	14	7
IC 31	TC4001BP	14	7
IC 32	TC4027BP	16	8
IC 33	TC4050BP	1	8
IC 34	TC4015BP	16	8
IC 35	TC4081BP	14	7
IC 36	TC4013BP	14	7
IC 37	TC4013BP	14	7
IC 38	MC14584BCP	14	7

BC-6 (AUDIO BLANKING SWITCHER)

Ref. No.	Type	Pin No. +5V	Pin No. GND
IC 1	M54529AP	14	7
IC 2	TC40174BP	16	8
IC 3	MC14094BCP	16	8
IC 4	M54529AP	14	7
IC 5	TC40174BP	16	8
IC 6	MC14094BCP	16	8
IC 7	M54529AP	14	7
IC 8	TC40174BP	16	8
IC 9	MC14094BCP	16	8
IC 10	TC4049BP	1	8
IC 11	TC4030BP	14	7
IC 12	M54529AP	14	7
IC 13	TC4555BP	16	8
IC 14	TC4081BP	14	7
IC 15	M54529AP	14	7
IC 16	MC14584BCP	14	7
IC 17	MC14584BCP	14	7

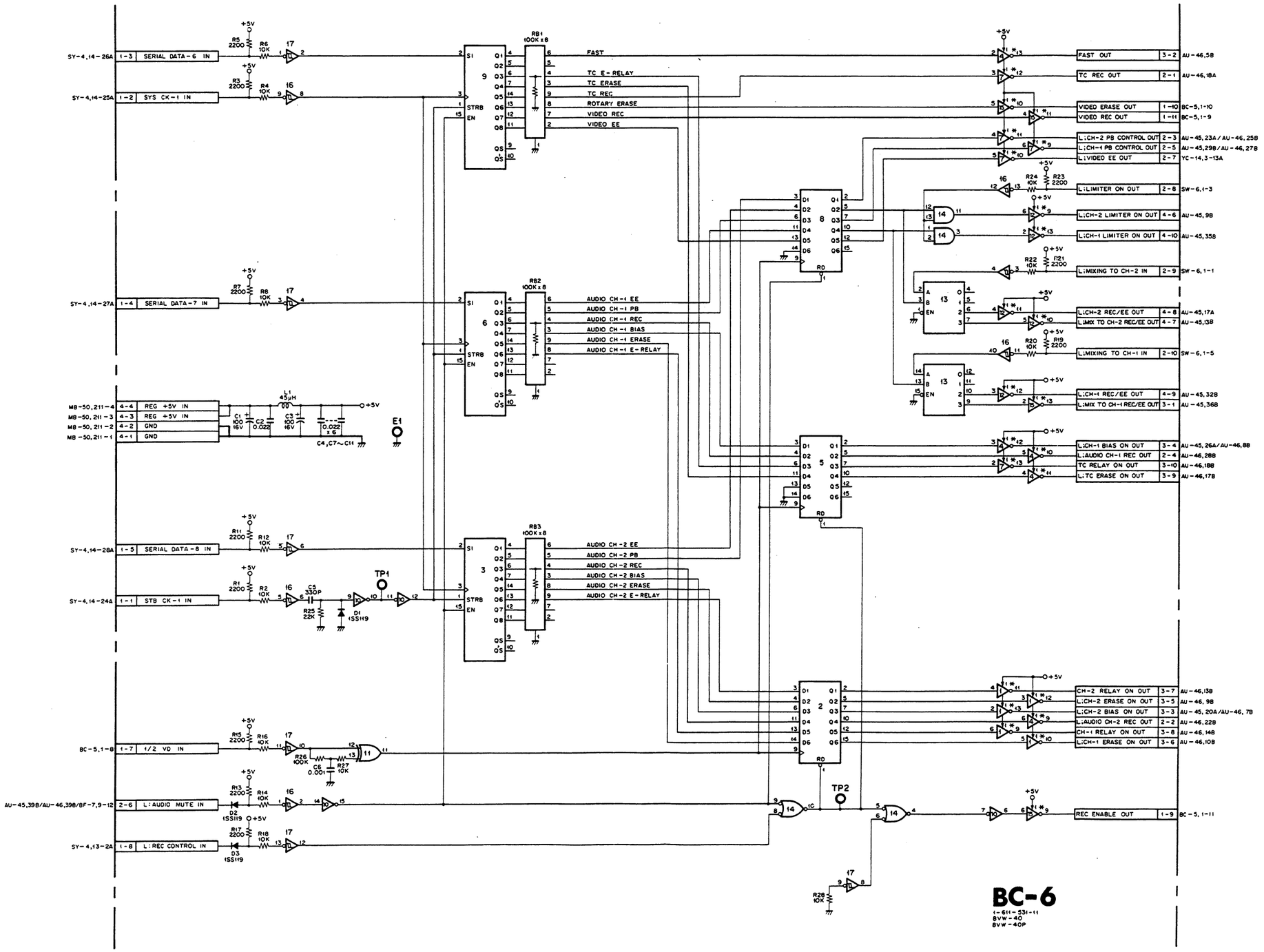


BC-6 –SOLDERING SIDE–

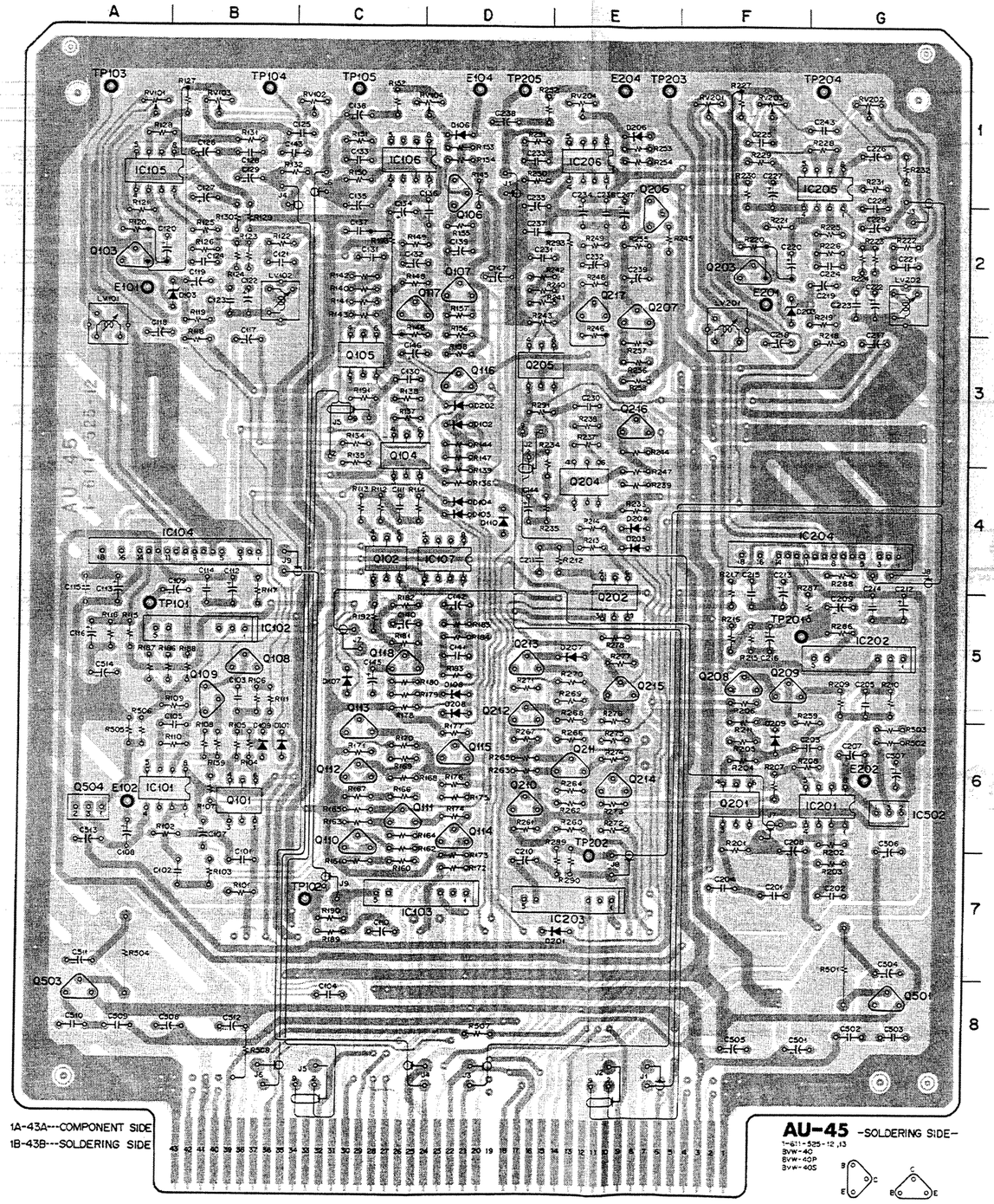
1-611-531-11
BVW-40
BVW-40P

CN1	A - 2	RB1	D - 1
CN2	A - 3	RB2	E - 1
CN3	C - 3	RB3	F - 1
CN4	D - 3		
		TP1	D - 3
D1	A - 2	TP2	D - 2
D2	A - 3		
D3	A - 1		
E1	B - 3		
IC1	F - 3		
IC2	F - 3		
IC3	F - 1		
IC4	E - 3		
IC5	E - 2		
IC6	E - 1		
IC7	D - 3		
IC8	D - 2		
IC9	D - 1		
IC10	C - 3		
IC11	C - 2		
IC12	B - 3		
IC13	B - 2		
IC14	B - 1		
IC15	A - 3		
IC16	A - 2		
IC17	A - 1		

BC-6 (AUDIO BLANKING SWITCHER)

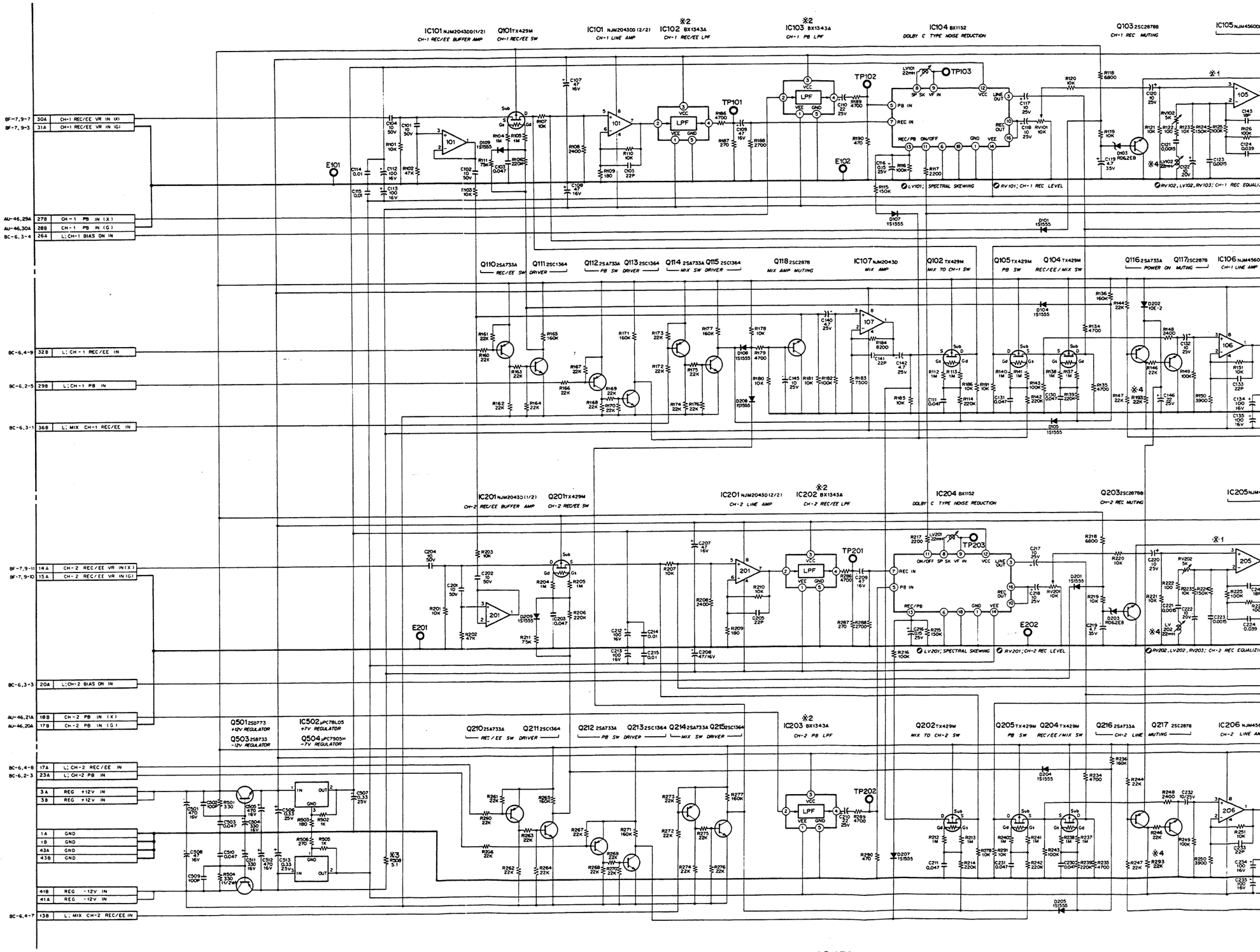


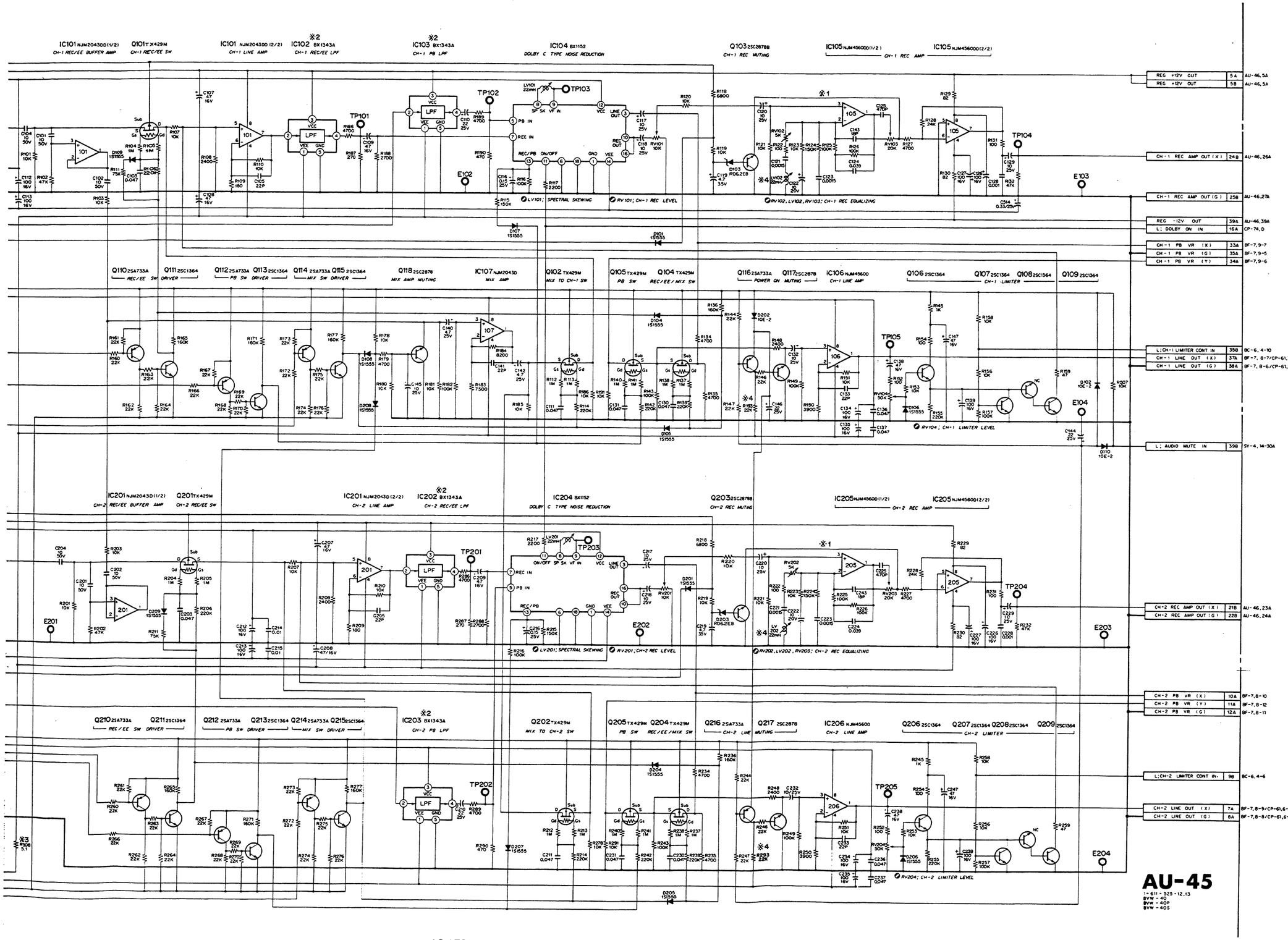
AU-45 (AUDIO REC PB SYSTEM)



D101	B - 6	Q118	C - 5
D102	D - 3	Q201	F - 6
D103	B - 2	Q202	E - 5
D104	D - 4	Q203	F - 2
D105	D - 4	Q204	E - 4
D106	D - 1	Q205	D - 3
D107	C - 5	Q206	E - 2
D108	D - 5	Q207	E - 2
D109	B - 6	Q208	F - 5
D110	D - 4	Q209	F - 5
D201	E - 7	Q210	D - 6
D202	D - 3	Q211	E - 6
D203	F - 2	Q212	D - 5
D204	E - 4	Q213	D - 5
D205	E - 4	Q214	E - 6
D206	E - 1	Q215	E - 5
D207	E - 5	Q216	E - 3
D208	D - 5	Q217	E - 2
D209	F - 6	Q501	G - 8
		Q503	A - 8
E101	A - 2	Q504	A - 6
E102	A - 6		
E104	D - 1	RV101	A - 1
E201	F - 2	RV102	C - 1
E202	G - 6	RV103	B - 1
E204	E - 1	RV104	D - 1
		RV201	F - 1
IC101	B - 6	RV202	G - 1
IC102	B - 5	RV203	F - 1
IC103	D - 7	RV204	E - 1
IC104	B - 4		
IC105	A - 1	TP101	A - 5
IC106	C - 1	TP102	C - 7
IC107	D - 4	TP103	A - 1
IC201	G - 6	TP104	B - 1
IC202	G - 5	TP105	C - 1
IC203	E - 7	TP201	F - 5
IC204	G - 4	TP202	E - 7
IC205	G - 1	TP203	E - 1
IC206	E - 1	TP204	G - 1
IC502	G - 6	TP205	D - 1
LV101	A - 2		
LV102	B - 2		
LV201	F - 2		
LV202	G - 2		
Q101	B - 6		
Q102	C - 4		
Q103	A - 2		
Q104	C - 3		
Q105	C - 3		
Q106	D - 1		
Q107	D - 2		
Q108	B - 5		
Q109	B - 5		
Q110	C - 6		
Q111	C - 6		
Q112	C - 6		
Q113	C - 6		
Q114	D - 6		
Q115	D - 6		
Q116	D - 3		
Q117	C - 2		

AU-45 (AUDIO REC PB SYSTEM)





NOTE:

MARK	CHANGE INFORMATION		SERIAL NO.
※1	CHANGE CONNECTION		UC: 10931 ~ J: 10396 ~ P: 10431 ~ S: 10011 ~
※2	IC102 IC103 IC202 IC203	AFL25F1500G1 → BX1343A	UC: 10931 ~ J: 10396 ~ P: 10481 ~ S: 10011 ~
※3	R508	5.1 ADDED	UC: 11329 ~ J: 10676 ~ P: 11041 ~ S: 10026 ~
※4	LV102 LV202 R193 R293	18 mH → 22 mH 22K ADDED	UC: 12069 ~ J: 10886 ~ P: 11131 ~ S: 10046 ~

AU-45

1-611-525-12,13

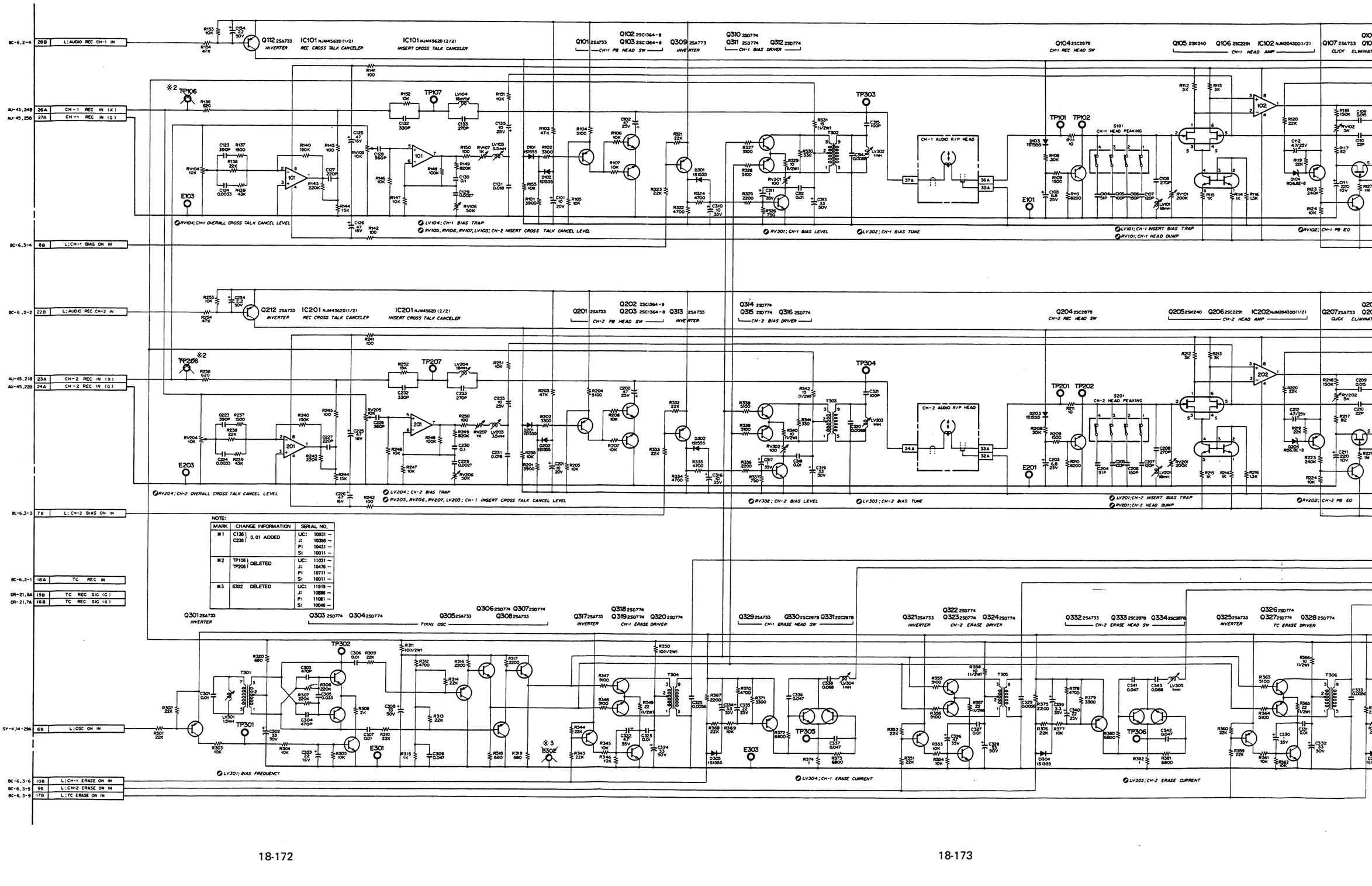
8VW-40

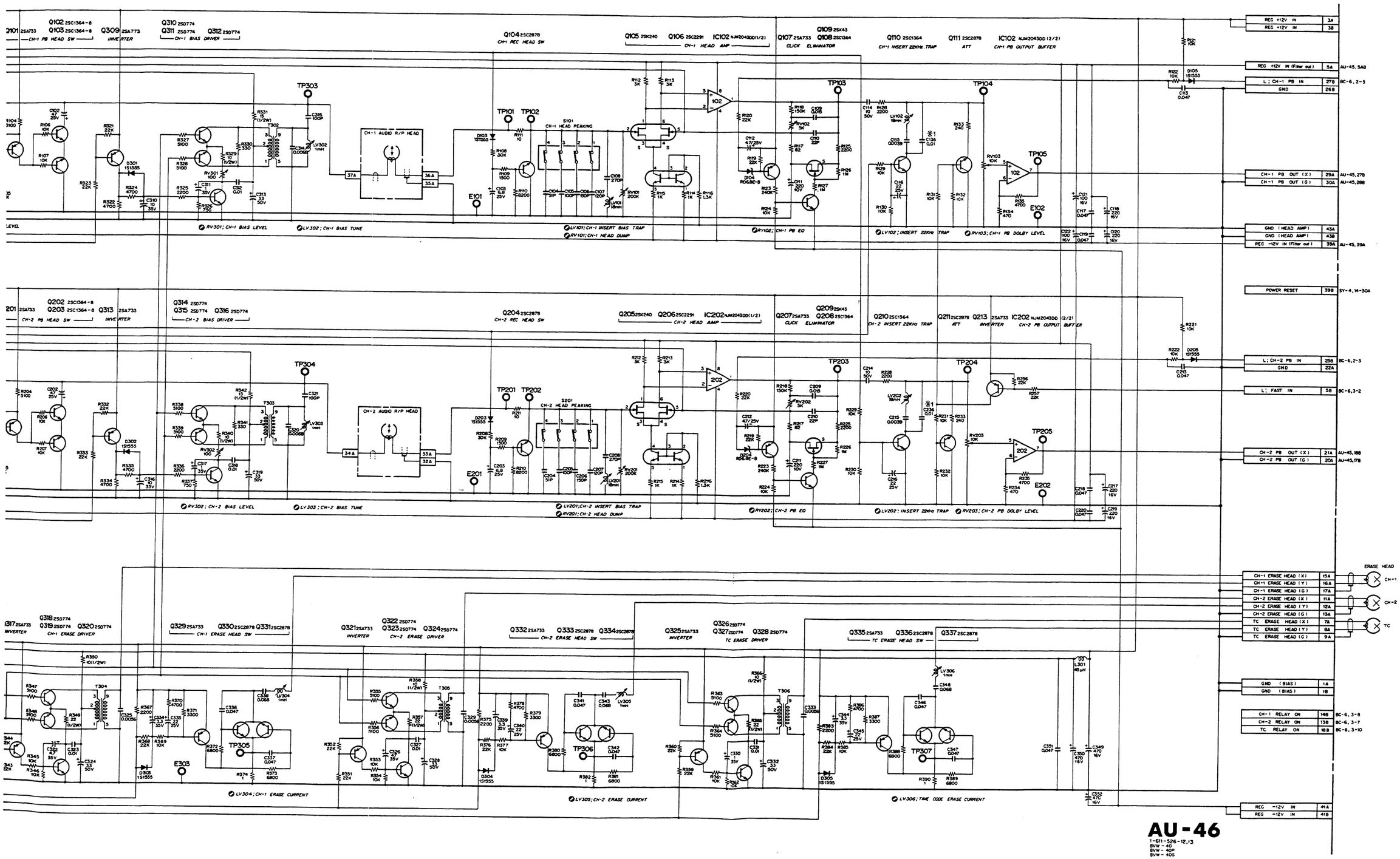
8VW-40P

8VW-40S

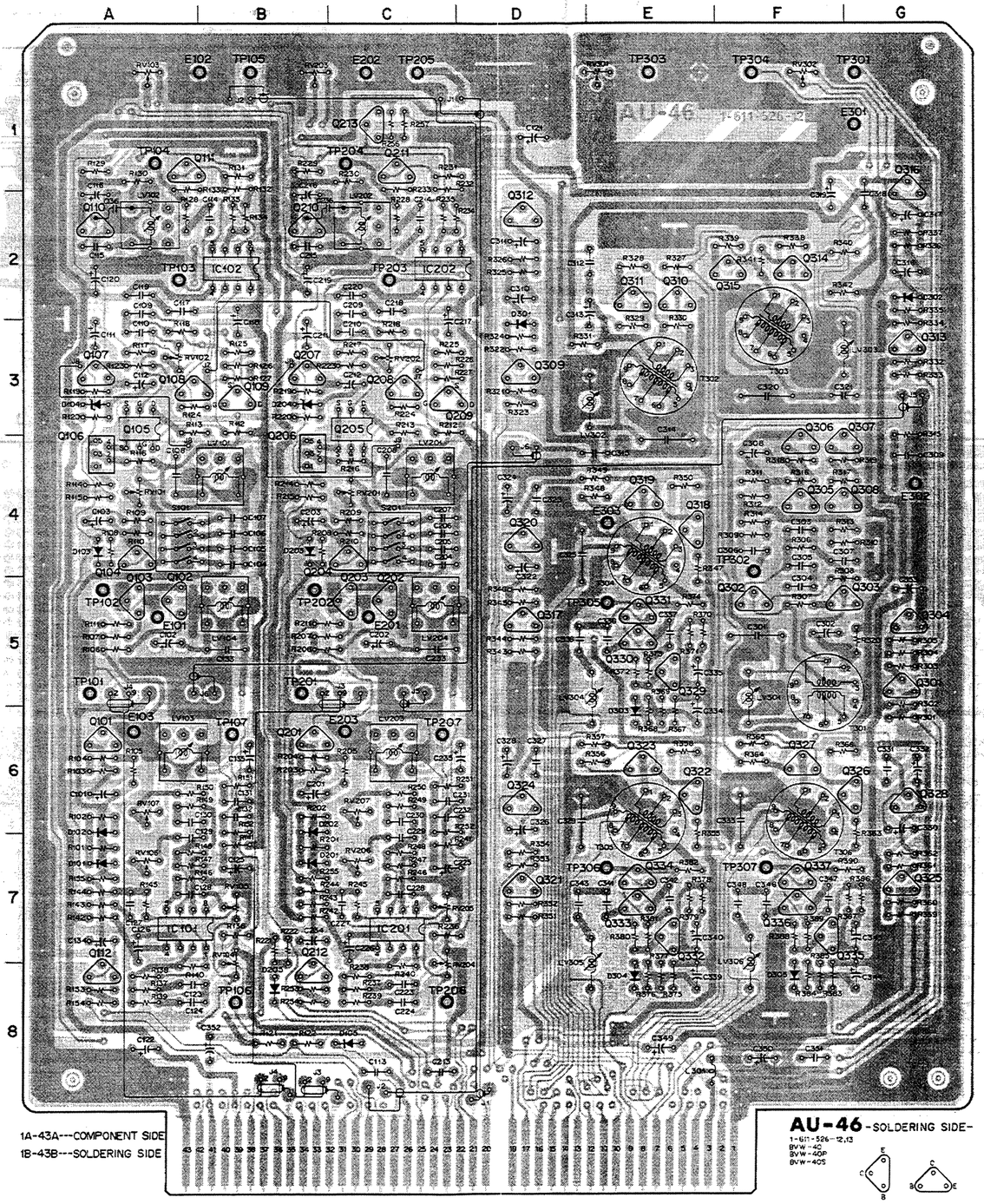
AU-46 AU-46

AU-46 (AUDIO REC PB SYSTEM)



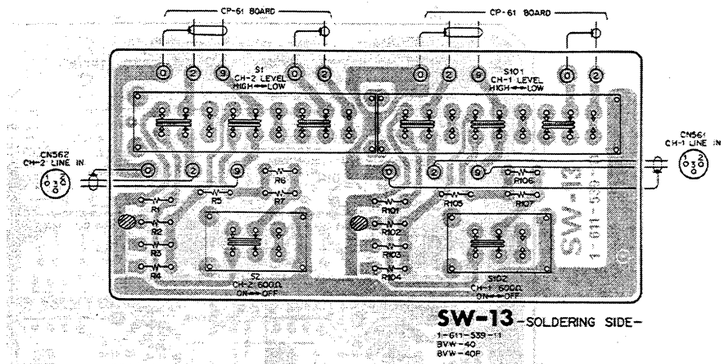

Q102 2SC1364-8
Q103 2SC1364-8
CH-1 PB HEAD SW
Q309 2SA773
INVERTER
Q310 2SD774
Q311 2SD774
CH-1 BIAS DRIVER
Q312 2SD774
Q104 2SC2878
CH-1 REC HEAD SW
Q105 2SK240
Q106 2SC2291
IC102 NJM2043OD(1/2)
CH-1 HEAD AMP
Q107 2SA733
CLICK ELIMINATOR
Q109 2SK43
Q108 2SC1364
Q110 2SC1364
CH-1 INSERT 22KHz TRAP
Q111 2SC2878
ATT
IC102 NJM2043OD (2/2)
CH-1 PB OUTPUT BUFFER
TP303
TP101
TP102
TP103
TP104
TP105
CH-1 AUDIO R/P HEAD
S101
CH-1 HEAD PEAKING
E101
E102
RV301; CH-1 BIAS LEVEL
LV302; CH-1 BIAS TUNE
LV101; CH-1 INSERT BIAS TRAP
RV101; CH-1 HEAD DUMP
RV102; CH-1 PB EQ
LV102; INSERT 22KHz TRAP
RV103; CH-1 PB DOLBY LEVEL
REG +12V IN 3A
REG +12V IN 3B
REG +12V IN (Filter out) 5A AU-45, 5AB
L; CH-1 PB IN 27B 8C-6, 2-5
GND 26B
CH-1 PB OUT (X) 29A AU-45, 27B
CH-1 PB OUT (G) 30A AU-45, 28B
GND (HEAD AMP) 43A
GND (HEAD AMP) 43B
REG -12V IN (Filter out) 39A AU-45, 39A
POWER RESET 39B 5Y-4, 14-30A
Q202 2SC1364-8
Q203 2SC1364-8
CH-2 PB HEAD SW
Q313 2SA733
INVERTER
Q314 2SD774
Q315 2SD774
Q316 2SD774
CH-2 BIAS DRIVER
Q204 2SC2878
CH-2 REC HEAD SW
Q205 2SK240
Q206 2SC2291
IC202 NJM2043OD(1/2)
CH-2 HEAD AMP
Q207 2SA733
CLICK ELIMINATOR
Q209 2SK43
Q208 2SC1364
Q210 2SC1364
CH-2 INSERT 22KHz TRAP
Q211 2SC2878
ATT
Q213 2SA733
INVERTER
IC202 NJM2043OD (2/2)
CH-2 PB OUTPUT BUFFER
TP304
TP201
TP202
TP203
TP204
TP205
CH-2 AUDIO R/P HEAD
S201
CH-2 HEAD PEAKING
E201
E202
RV302; CH-2 BIAS LEVEL
LV303; CH-2 BIAS TUNE
LV201; CH-2 INSERT BIAS TRAP
RV201; CH-2 HEAD DUMP
RV202; CH-2 PB EQ
LV202; INSERT 22KHz TRAP
RV203; CH-2 PB DOLBY LEVEL
L; CH-2 PB IN 25B 8C-6, 2-3
GND 22A
L; FAST IN 5B 8C-6, 3-2
CH-2 PB OUT (X) 21A AU-45, 18B
CH-2 PB OUT (G) 20A AU-45, 17B
Q317 2SA733
INVERTER
Q318 2SD774
Q319 2SD774
Q320 2SD774
CH-1 ERASE DRIVER
Q329 2SA733
Q330 2SC2878
Q331 2SC2878
CH-1 ERASE HEAD SW
Q321 2SA733
INVERTER
Q322 2SD774
Q323 2SD774
Q324 2SD774
CH-2 ERASE DRIVER
Q332 2SA733
Q333 2SC2878
Q334 2SC2878
CH-2 ERASE HEAD SW
Q325 2SA733
INVERTER
Q326 2SD774
Q327 2SD774
Q328 2SD774
TC ERASE DRIVER
Q335 2SA733
Q336 2SC2878
Q337 2SC2878
TC ERASE HEAD SW
ERASE HEAD
CH-1
CH-2
TC
CH-1 ERASE HEAD (X) 15A
CH-1 ERASE HEAD (Y) 16A
CH-1 ERASE HEAD (G) 17A
CH-2 ERASE HEAD (X) 11A
CH-2 ERASE HEAD (Y) 12A
CH-2 ERASE HEAD (G) 13A
TC ERASE HEAD (X) 7A
TC ERASE HEAD (Y) 8A
TC ERASE HEAD (G) 9A
GND (BIAS) 1A
GND (BIAS) 1B
CH-1 RELAY ON 14B 8C-6, 3-8
CH-2 RELAY ON 13B 8C-6, 3-7
TC RELAY ON 18B 8C-6, 3-10
REG -12V IN 41A
REG -12V IN 41B
E303
TP305
TP306
TP307
LV304; CH-1 ERASE CURRENT
LV305; CH-2 ERASE CURRENT
LV306; TIME CODE ERASE CURRENT
AU-46
1-611-526-12,13
BVW-40
BVW-40P
BVW-40S

AU-46 (AUDIO REC PB SYSTEM)

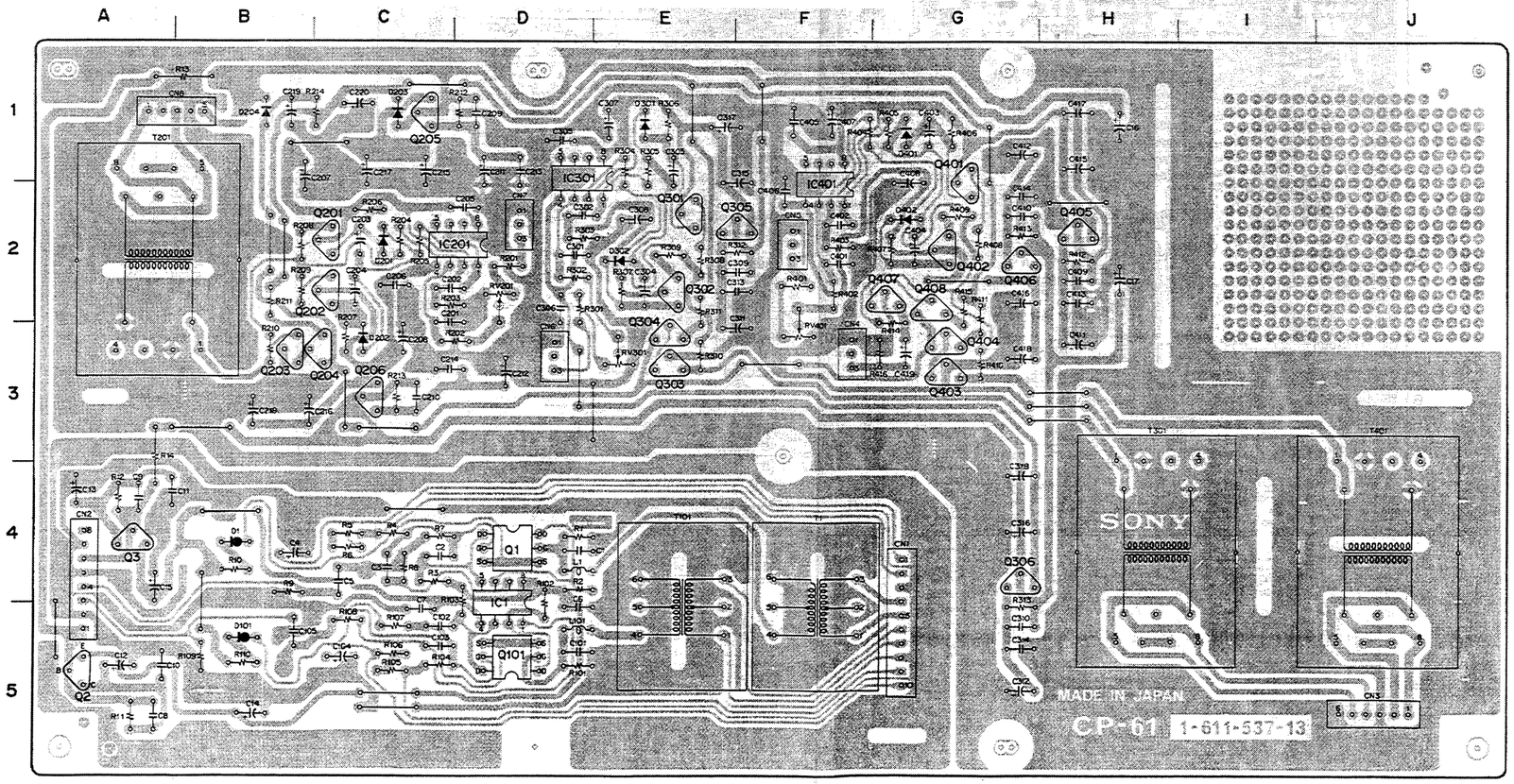


D101	A - 7	Q330	E - 5		
D102	A - 6	Q331	E - 5		
D103	A - 4	Q332	E - 7		
D104	A - 3	Q333	E - 7		
D105	C - 8	Q334	E - 7		
D201	B - 7	Q335	F - 7		
D202	B - 7	Q336	F - 7		
D203	B - 4	Q337	F - 7		
D204	B - 3				
D205	B - 8	RV101	A - 4		
D301	D - 3	RV102	A - 3		
D302	G - 2	RV103	A - 1		
D303	E - 6	RV104	B - 7		
D304	E - 8	RV105	B - 7		
D305	F - 8	RV106	A - 7		
		RV107	A - 6		
E101	A - 5	RV201	C - 4		
E102	B - 1	RV202	C - 3		
E103	A - 6	RV203	B - 1		
E201	C - 5	RV204	C - 8		
E202	C - 1	RV205	C - 7		
E203	C - 6	RV206	C - 7		
E301	G - 1	RV207	C - 6		
E302	G - 4	RV301	E - 1		
E303	E - 4	RV302	F - 1		
IC101	A - 7	S101	A - 4		
IC102	B - 2	S201	C - 4		
IC201	C - 7				
IC202	C - 2	T301	F - 5		
		T302	E - 3		
LV101	B - 4	T303	F - 3		
LV102	A - 2	T304	E - 4		
LV103	A - 6	T305	E - 6		
LV104	B - 5	T306	F - 6		
LV201	C - 1				
LV202	C - 2	TP101	A - 5		
LV203	C - 6	TP102	A - 5		
LV204	C - 5	TP103	A - 2		
LV301	F - 5	TP104	A - 1		
LV302	E - 3	TP105	B - 1		
LV303	G - 3	TP106	B - 8		
LV304	E - 5	TP107	B - 6		
LV305	E - 7	TP201	B - 5		
LV306	F - 7	TP202	B - 5		
		TP203	C - 2		
Q101	A - 6	TP204	C - 1		
Q102	A - 5	TP205	C - 1		
Q103	A - 5	TP206	C - 8		
Q104	A - 4	TP207	C - 6		
Q105	A - 3	TP301	G - 1		
Q106	A - 4	TP302	F - 4		
Q107	A - 3	TP303	E - 1		
Q108	A - 3	TP304	F - 1		
Q109	B - 3	TP305	E - 5		
Q110	A - 2	TP306	E - 7		
Q111	A - 1	TP307	F - 7		
Q112	A - 8				
Q201	B - 6				
Q202	C - 5				
Q203	C - 5				
Q204	C - 4				
Q205	C - 3				
Q206	B - 4				
Q207	B - 3				
Q208	C - 3				
Q209	C - 3				
Q210	B - 2				
Q211	C - 1				
Q212	B - 8				
Q213	C - 1				
Q301	G - 5				
Q302	F - 5				
Q303	G - 5				
Q304	G - 5				
Q305	F - 4				
Q306	F - 4				
Q307	G - 4				
Q308	G - 4				
Q309	D - 3				
Q310	E - 2				
Q311	E - 2				
Q312	D - 2				
Q313	G - 3				
Q314	F - 2				
Q315	F - 2				
Q316	G - 2				
Q317	D - 5				
Q318	E - 4				
Q319	E - 4				
Q320	D - 4				
Q321	D - 7				
Q322	E - 6				
Q323	E - 6				
Q324	D - 6				
Q325	G - 7				
Q326	G - 6				
Q327	F - 6				
Q328	G - 6				
Q329	E - 5				

CP-61 (AUDIO INPUT/OUTPUT AMPLIFIER)
SW-13



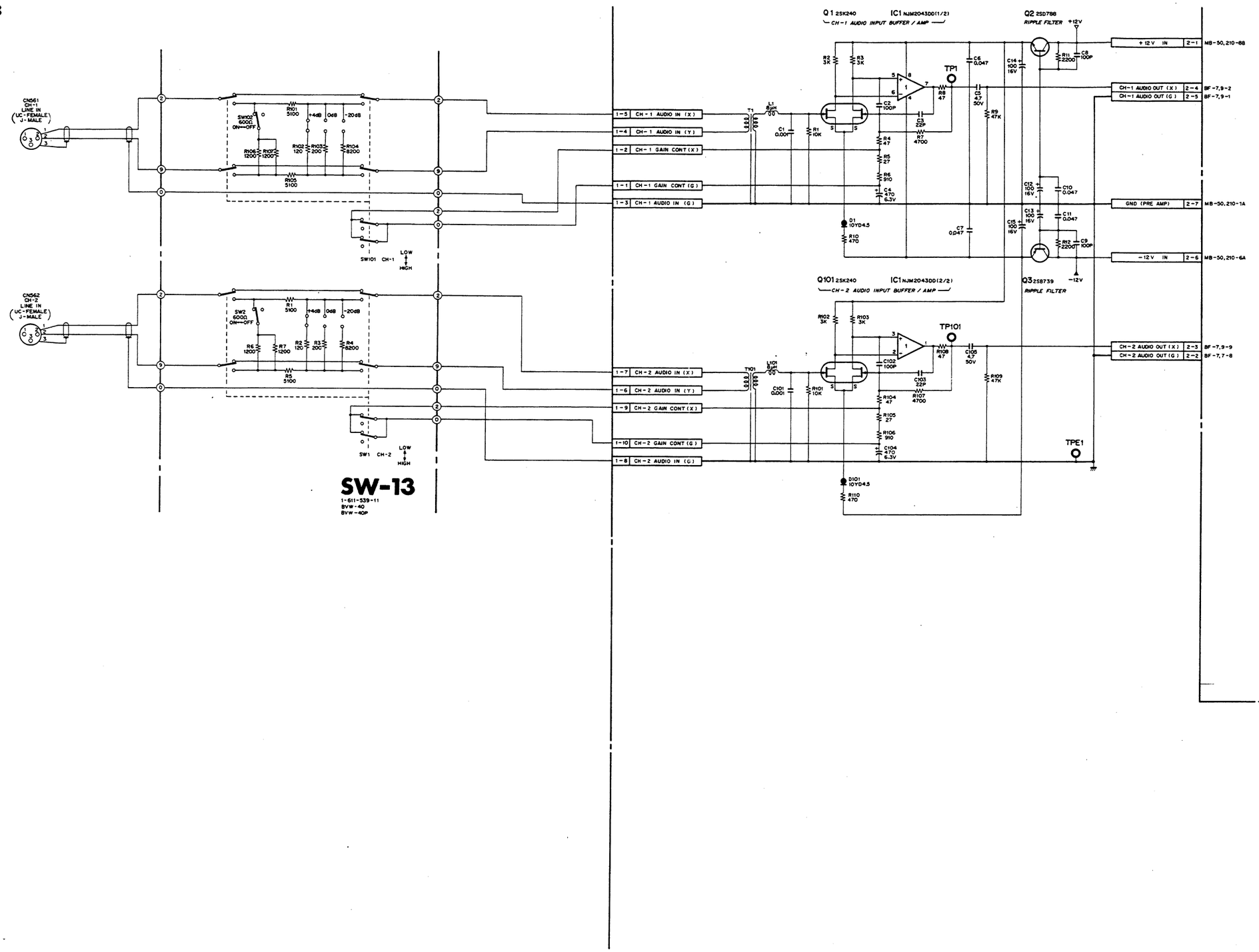
SW-13 –SOLDERING SIDE–
1-611-539-13
BVW-40
BVW-40P



CP-61 –SOLDERING SIDE–
1-611-537-13
BVW-40
BVW-40P

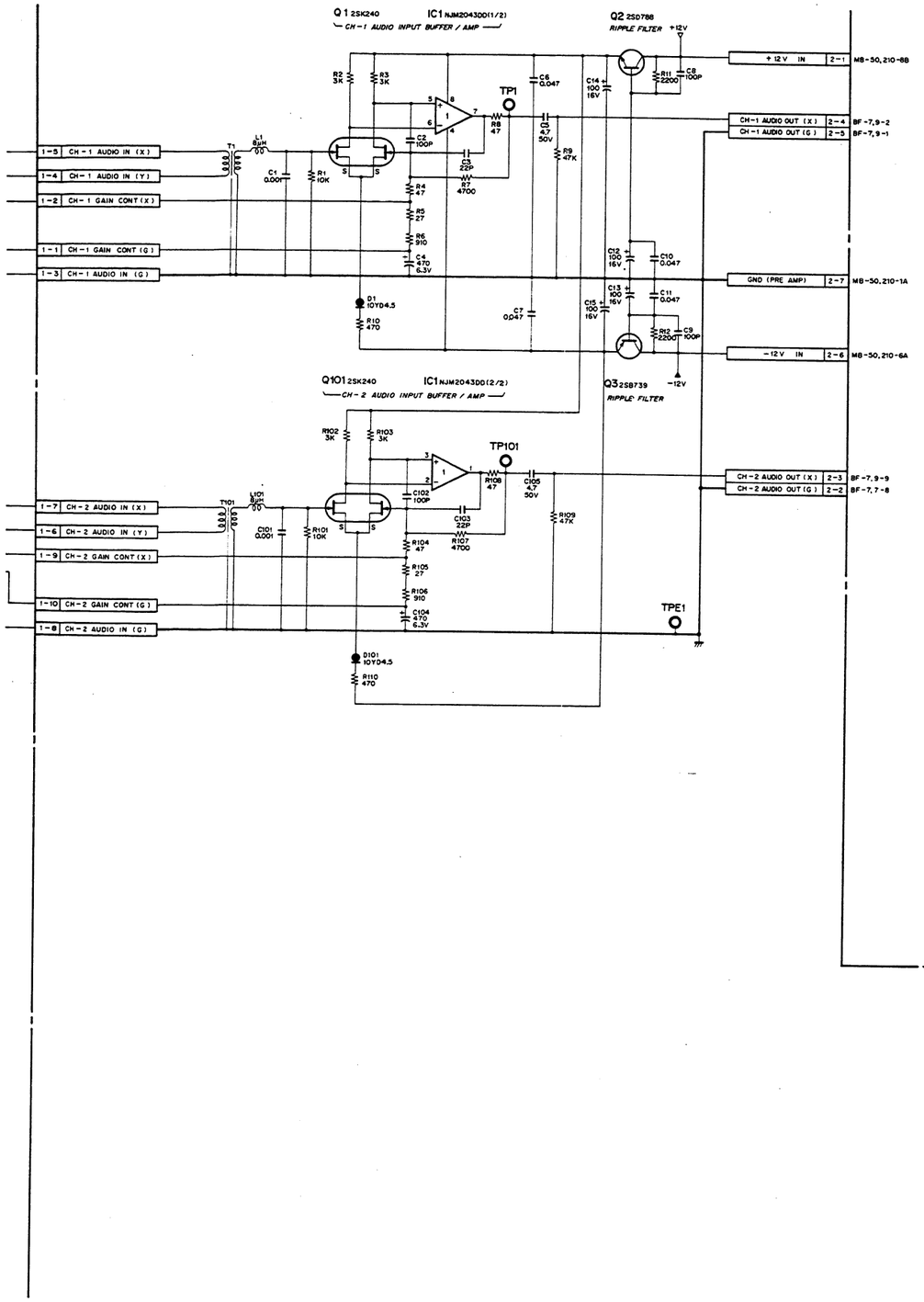
CN1	G - 5
CN2	A - 4
CN3	J - 5
CN4	F - 3
CN5	F - 2
CN6	D - 3
CN7	D - 2
CN8	B - 1
D1	B - 4
D101	B - 5
D201	C - 2
D202	C - 3
D203	C - 1
D204	B - 1
D301	E - 1
D302	E - 2
D401	G - 1
D402	G - 2
IC1	D - 5
IC201	D - 2
IC301	D - 1
IC401	F - 2
Q1	D - 4
Q2	A - 5
Q3	A - 4
Q101	D - 5
Q201	C - 2
Q202	C - 2
Q203	B - 3
Q204	C - 3
Q205	C - 1
Q206	C - 3
Q301	E - 2
Q302	E - 2
Q303	E - 3
Q304	E - 3
Q305	F - 2
Q306	G - 4
Q401	G - 2
Q402	G - 2
Q403	G - 3
Q404	G - 3
Q405	H - 2
Q406	G - 2
Q407	G - 2
Q408	G - 2
RV201	D - 2
RV301	E - 3
RV401	F - 3
T1	F - 5
T101	E - 5
T201	A - 2
T301	H - 4
T401	J - 4

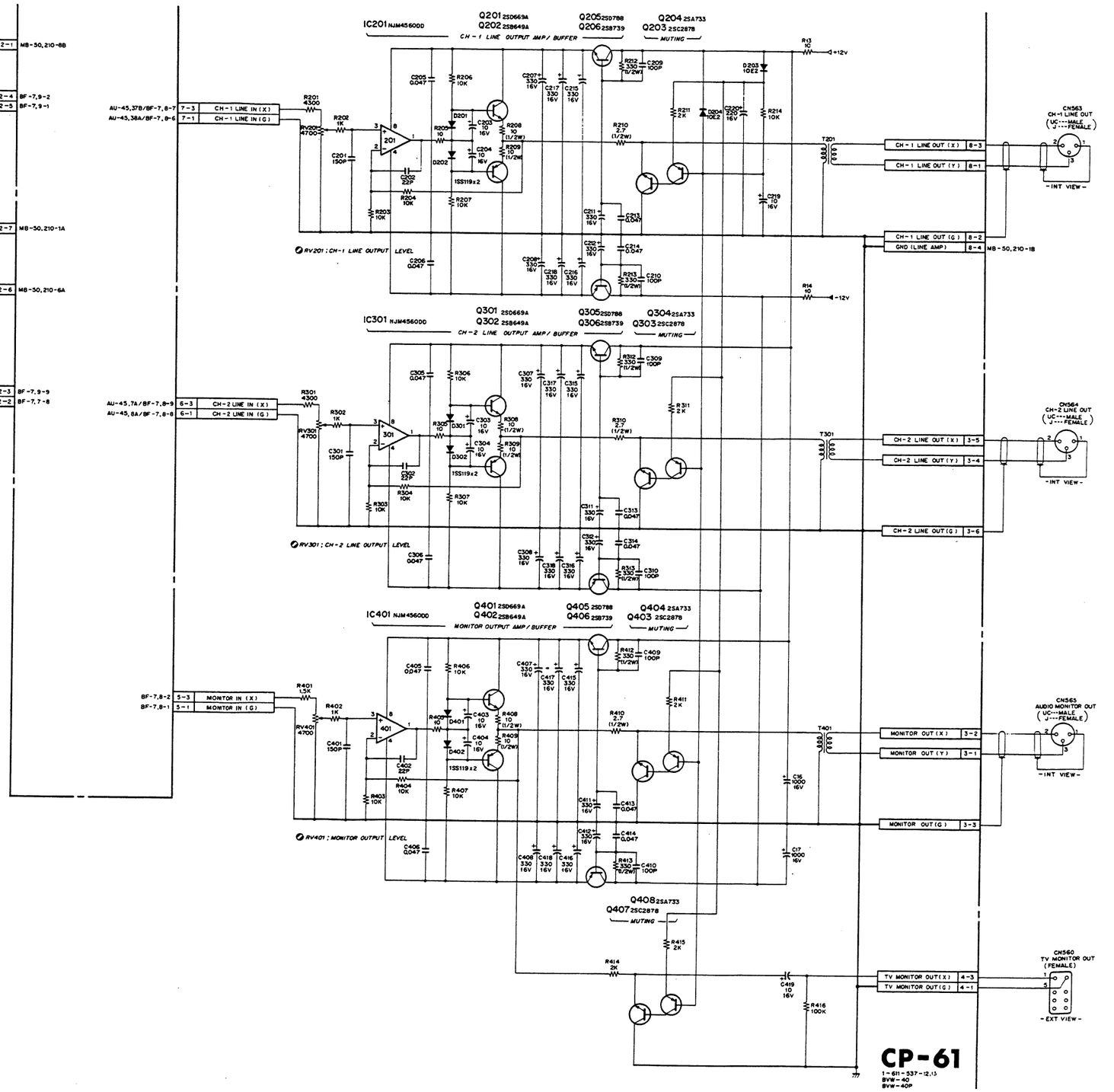
CP-61 (AUDIO INPUT/OUTPUT AMPLIFIER)
SW-13



SW-13
1-611-539-11
8VW-40
8VW-40P

CP-61, SW-13

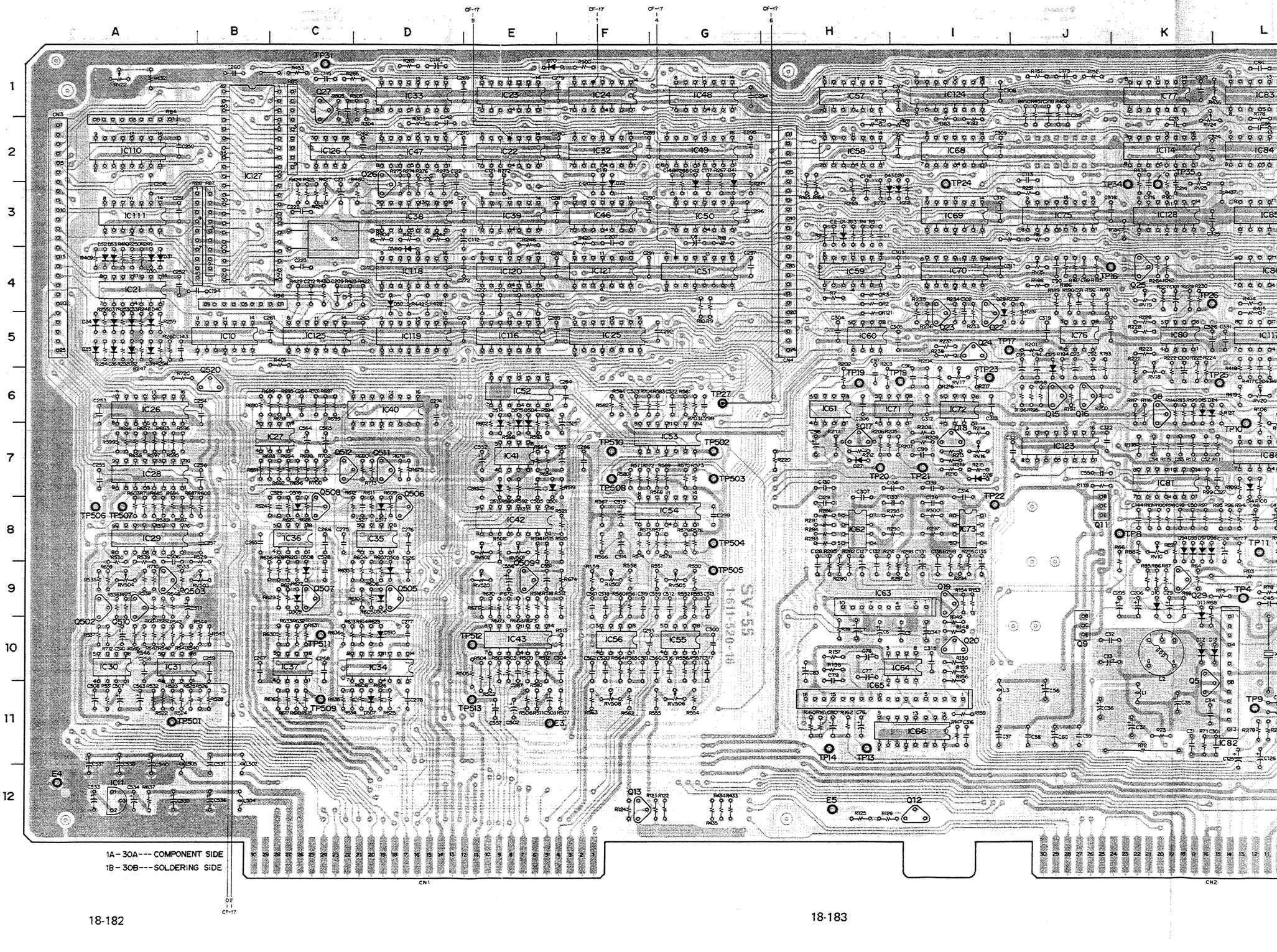

Q1 2SK240
IC1 NJM2043D0(1/2)
CH-1 AUDIO INPUT BUFFER / AMP
Q2 2SD788
RIPPLE FILTER
+12V
1-5 CH-1 AUDIO IN (X)
1-4 CH-1 AUDIO IN (Y)
1-2 CH-1 GAIN CONT (X)
1-1 CH-1 GAIN CONT (G)
1-3 CH-1 AUDIO IN (G)
+12V IN 2-1 MB-50,210-8B
CH-1 AUDIO OUT (X) 2-4 BF-7,9-2
CH-1 AUDIO OUT (G) 2-5 BF-7,9-1
GND (PRE AMP) 2-7 MB-50,210-1A
-12V IN 2-6 MB-50,210-6A
TP1
Q101 2SK240
IC1 NJM2043D0(2/2)
CH-2 AUDIO INPUT BUFFER / AMP
Q3 2SB739
RIPPLE FILTER
-12V
TP101
TPE1
1-7 CH-2 AUDIO IN (X)
1-6 CH-2 AUDIO IN (Y)
1-9 CH-2 GAIN CONT (X)
1-10 CH-2 GAIN CONT (G)
1-8 CH-2 AUDIO IN (G)
CH-2 AUDIO OUT (X) 2-3 BF-7,9-9
CH-2 AUDIO OUT (G) 2-2 BF-7,7-8

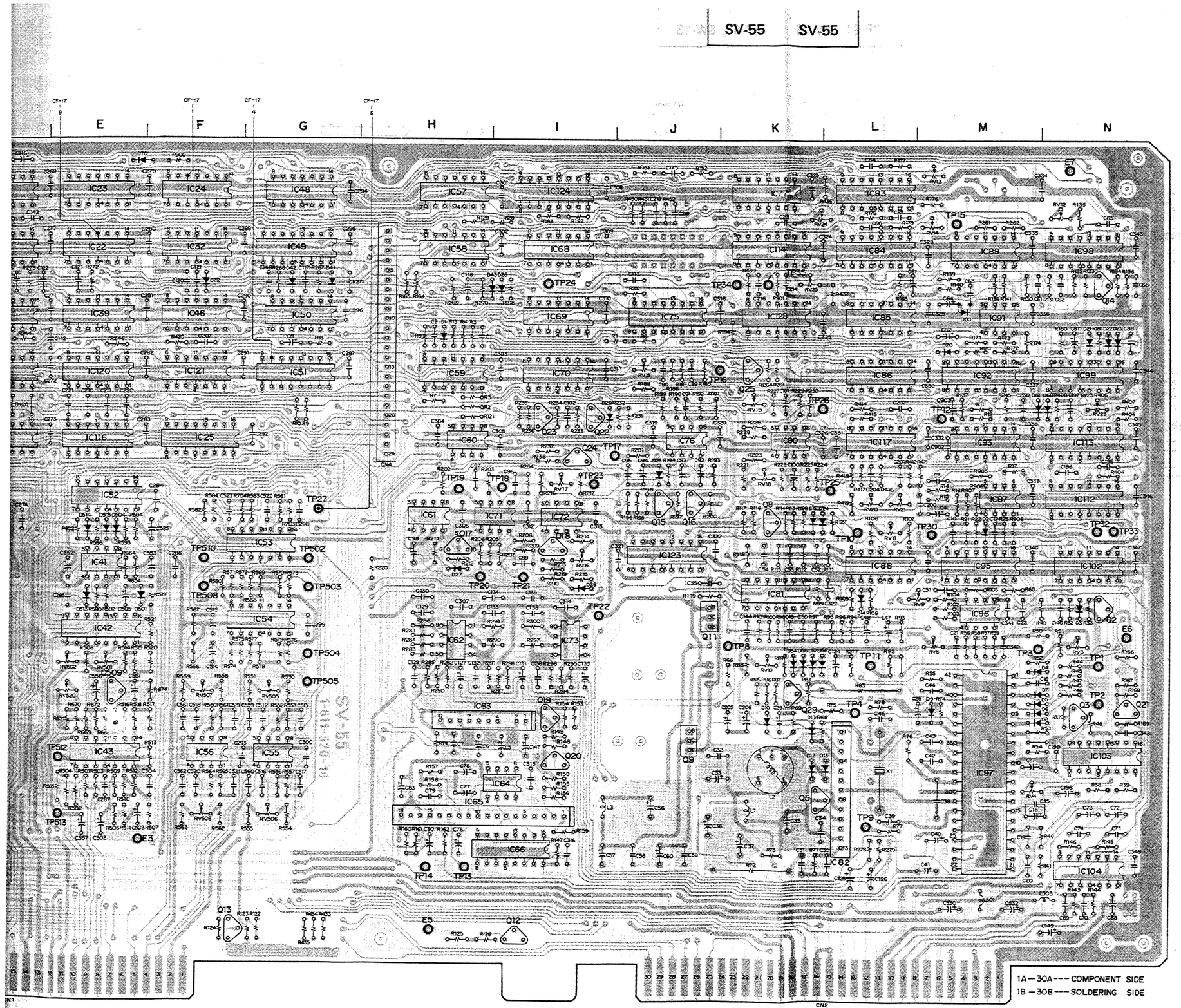

IC201 NJM4560D0
Q201 2SD669A
Q202 2SB649A
CH-1 LINE OUTPUT AMP/ BUFFER
Q205 2SD788
Q206 2SB739
Q204 2SA733
Q203 2SC2878
MUTING
AU-45,37B/BF-7,8-7 7-3 CH-1 LINE IN (X)
AU-45,38A/BF-7,8-6 7-1 CH-1 LINE IN (G)
RV201 : CH-1 LINE OUTPUT LEVEL
CH-1 LINE OUT (X) 8-3
CH-1 LINE OUT (Y) 8-1
CH-1 LINE OUT (G) 8-2
GND (LINE AMP) 8-4 MB-50,210-1B
CN563 CH-1 LINE OUT (UC---MALE J---FEMALE)
IC301 NJM4560D0
Q301 2SD669A
Q302 2SB649A
CH-2 LINE OUTPUT AMP/ BUFFER
Q305 2SD788
Q306 2SB739
Q304 2SA733
Q303 2SC2878
MUTING
AU-45,7A/BF-7,8-9 6-3 CH-2 LINE IN (X)
AU-45,8A/BF-7,8-8 6-1 CH-2 LINE IN (G)
RV301 : CH-2 LINE OUTPUT LEVEL
CH-2 LINE OUT (X) 3-5
CH-2 LINE OUT (Y) 3-4
CH-2 LINE OUT (G) 3-6
CN564 CH-2 LINE OUT (UC---MALE J---FEMALE)
Q401 2SD669A
Q402 2SB649A
MONITOR OUTPUT AMP / BUFFER
Q405 2SD788
Q406 2SB739
Q404 2SA733
Q403 2SC2878
MUTING
IC401 NJM4560D0
BF-7,8-2 5-3 MONITOR IN (X)
BF-7,8-1 5-1 MONITOR IN (G)
RV401 : MONITOR OUTPUT LEVEL
MONITOR OUT (X) 3-2
MONITOR OUT (Y) 3-1
MONITOR OUT (G) 3-3
CN565 AUDIO MONITOR OUT (UC---MALE J---FEMALE)
Q408 2SA733
Q407 2SC2878
MUTING
TV MONITOR OUT (X) 4-3
TV MONITOR OUT (G) 4-1
CN560 TV MONITOR OUT (FEMALE)
CP-61
1-611-537-12.1
BVW-40
BVW-40P

SV-55 SV-55

SV-55 (SERVO SYSTEM)

CN1	D - 12	IC39	E - 3	Q27	C - 1
CN2	L - 12	IC40	D - 6	Q29	K - 9
CN3	A - 2	IC41	E - 7	Q502	A - 9
CN4	H - 3	IC42	E - 8	Q503	A - 9
		IC43	E - 10	Q505	D - 9
D1	H - 3	IC45	F - 3	Q506	D - 8
D2	M - 7	IC47	D - 2	Q507	C - 9
D3	N - 8	IC48	G - 1	Q508	C - 8
D4	N - 9	IC49	G - 2	Q509	E - 9
D5	N - 9	IC50	G - 3	Q510	A - 9
D6	N - 9	IC51	G - 4	Q511	D - 7
D7	N - 9	IC52	E - 6	Q512	C - 7
D8	N - 9	IC53	G - 7	Q520	B - 6
D9	M - 9	IC54	G - 8		
D10	K - 9	IC55	G - 10	RB4	A - 2
D11	K - 10	IC56	F - 10	RB5	C - 2
D12	K - 10	IC57	H - 1	RB6	B - 4
D13	L - 10	IC58	H - 2	RB7	B - 3
D14	L - 8	IC59	H - 4	RB8	B - 3
D15	K - 6	IC60	H - 5		
D20	M - 4	IC61	H - 6	RV3	N - 8
D21	N - 3	IC62	H - 8	RV4	M - 11
D22	N - 3	IC63	H - 9	RV5	M - 8
D23	N - 3	IC64	I - 10	RV9	M - 7
D24	L - 6	IC65	H - 11	RV10	K - 8
D25	J - 6	IC66	I - 11	RV11	L - 7
D26	I - 7	IC68	I - 2	RV12	N - 1
D27	H - 7	IC69	I - 3	RV13	M - 1
D28	I - 3	IC70	I - 4	RV14	M - 2
D29	I - 5	IC71	I - 6	RV15	J - 4
D30	A - 4	IC72	I - 6	RV16	I - 7
D31	A - 4	IC73	I - 8	RV17	I - 6
D32	A - 5	IC75	J - 3	RV18	K - 6
D33	A - 5	IC76	J - 5	RV19	K - 4
D34	A - 5	IC77	K - 1	RV20	L - 6
D35	A - 5	IC80	K - 5	RV21	L - 6
D36	A - 5	IC81	K - 7	RV22	A - 1
D37	A - 5	IC82	L - 11	RV23	N - 4
D39	A - 5	IC83	L - 1	RV24	K - 2
D40	A - 5	IC84	L - 2	RV25	K - 2
D41	C - 3	IC85	L - 3	RV501	E - 8
D42	G - 3	IC86	L - 4	RV502	E - 8
D43	I - 3	IC87	M - 6	RV503	B - 9
D52	A - 4	IC88	L - 7	RV504	A - 9
D53	A - 4	IC89	M - 2	RV505	G - 9
D54	K - 8	IC91	M - 3	RV506	G - 11
D55	K - 8	IC92	M - 4	RV507	F - 9
D56	L - 8	IC93	M - 5	RV508	F - 11
D57	K - 8	IC95	M - 7	RV520	E - 9
D58	D - 4	IC96	M - 8		
D59	D - 4	IC97	M - 10	TP1	N - 8
D60	N - 4	IC98	N - 2	TP2	N - 9
D61	M - 4	IC99	N - 4	TP3	M - 8
D70	E - 1	IC102	N - 7	TP4	L - 9
D72	F - 3	IC103	N - 10	TP8	K - 8
D80	M - 3	IC104	N - 11	TP9	L - 11
D501	B - 7	IC110	A - 2	TP10	L - 7
D504	B - 7	IC111	A - 3	TP11	L - 8
D505	D - 9	IC112	N - 6	TP12	M - 5
D506	D - 9	IC113	N - 5	TP13	H - 11
D507	D - 11	IC114	K - 2	TP14	H - 11
D508	C - 9	IC115	J - 2	TP15	M - 2
D509	C - 9	IC116	E - 5	TP16	K - 4
D510	D - 10	IC117	L - 5	TP17	J - 5
D513	E - 7	IC118	D - 4	TP18	I - 6
D514	E - 7	IC119	D - 5	TP19	H - 6
D515	E - 7	IC120	E - 4	TP20	H - 7
D517	D - 8	IC121	F - 4	TP21	I - 7
D518	C - 8	IC123	J - 7	TP22	I - 8
		IC124	I - 1	TP23	I - 6
E3	E - 11	IC125	C - 5	TP24	I - 3
E4	A - 12	IC126	C - 2	TP25	L - 6
E5	H - 12	IC127	B - 2	TP26	L - 4
E6	N - 8	IC128	K - 3	TP27	G - 6
E7	N - 1			TP30	M - 7
		Q2	N - 8	TP31	C - 1
IC10	B - 5	Q3	N - 9	TP32	N - 7
IC11	A - 12	Q5	L - 11	TP33	N - 7
IC21	A - 4	Q6	K - 6	TP34	K - 3
IC22	E - 2	Q9	J - 10	TP35	K - 3
IC23	E - 1	Q11	J - 8	TP501	A - 11
IC24	F - 1	Q12	I - 12	TP502	G - 7
IC25	F - 5	Q13	N - 12	TP503	G - 7
IC26	A - 6	Q14	N - 3	TP504	G - 8
IC27	C - 7	Q15	J - 6	TP505	G - 9
IC28	A - 7	Q16	J - 6	TP506	A - 8
IC29	A - 8	Q17	H - 7	TP507	A - 8
IC30	A - 10	Q18	I - 7	TP508	F - 7
IC31	A - 10	Q19	I - 9	TP509	C - 11
IC32	F - 2	Q20	I - 10	TP510	F - 7
IC33	D - 1	Q21	N - 9	TP511	C - 10
IC34	D - 10	Q22	I - 5	TP512	E - 10
IC35	D - 8	Q23	I - 5	TP513	E - 11
IC36	C - 8	Q24	I - 5		
IC37	C - 10	Q25	K - 1	X1	L - 10
IC38	D - 3	Q26	D - 3	X3	C - 3

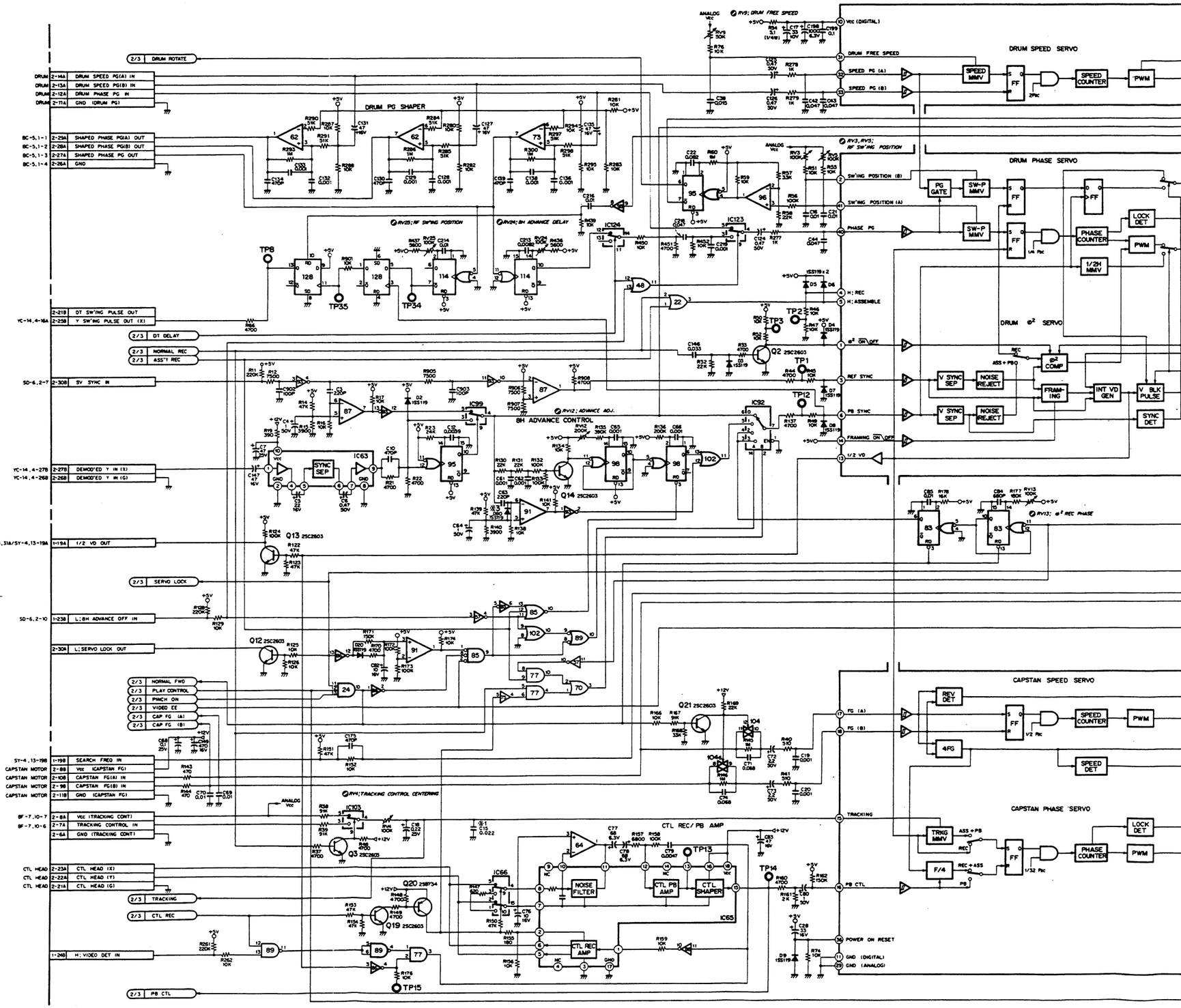




SV-55

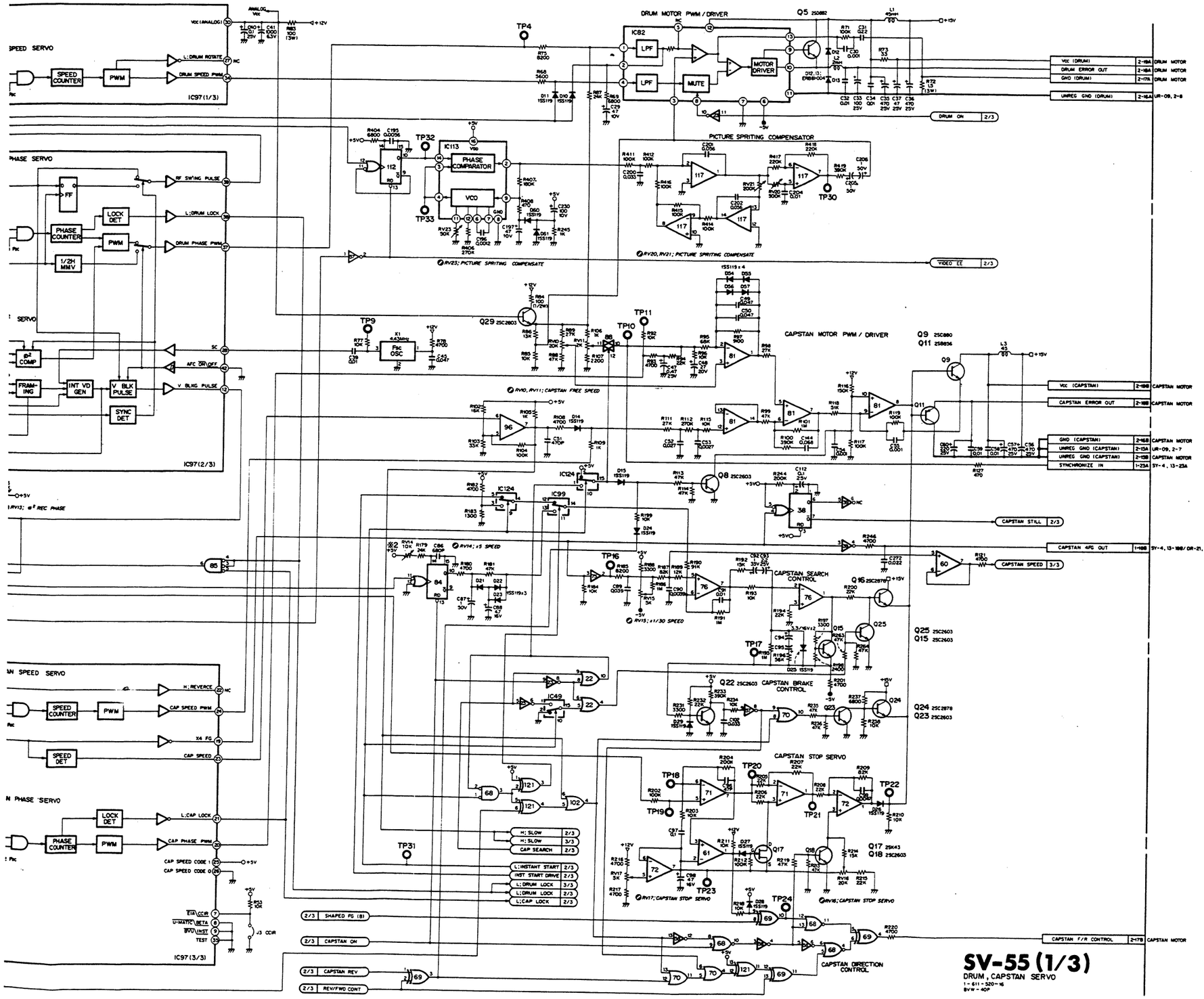
Ref. No.	Type	Pin No.						
		5V	12V	15V	−5V	−12V	−15V	GND
IC 10	SN74LS37N	14						7
IC 11	NJM78L05A	REFER TO SCHEMATIC						
IC 21	MC14584BCP	14						7
IC 22	TC4071BP	14						7
IC 23	TC4069UBP	14						7
IC 24	TC4073BP	14						7
IC 25	TC4021BP	16						8
IC 26	TC4051BP	16			7			8
IC 27	μPC358C	8						4
IC 28	TC4051BP	16			7			8
IC 29	HD14538BP	16						8
IC 30	μPC358C	8						4
IC 31	NJM2903D	8						4
IC 32	TC4001BP	14						7
IC 33	HD14538BP	16						8
IC 34	μPC339C			8			4	
IC 35	μPC358C			8			4	
IC 36	μPC358C			8			4	
IC 37	NJM4558D-FA			8			4	
IC 38	HD14538BP	16						8
IC 39	TC4069UBP	14						7
IC 40	TC5067BP	16						8
IC 41	μPC4558C		8		4			
IC 42	TC4053BP	16						7, 8
IC 43	μPC324C		4					11
IC 46	TC4081BP	14						7
IC 47	TC4053BP	16						7, 8
IC 48	TC4071BP	14						7
IC 49	TC4053BP	16						7, 8
IC 50	TC4001BP	14						7
IC 51	HD14538BP	16						8
IC 52	TC4013BP	14						7
IC 53	TC4030BP	14						7
IC 54	μPC339C		8					4
IC 55	μPC4558C		8					4
IC 56	μPC4558C		8					4
IC 57	TC4069UBP	14						7
IC 58	TC4069UBP	14						7
IC 59	TC4011BP	14						7
IC 60	μPC4558C			8	4			
IC 61	NJM2903D		8					4
IC 62	μPC358C	8						4
IC 63	BX3915A	REFER TO SCHEMATIC						
IC 64	NJM4558D-D		8					4
IC 65	BX3914	REFER TO SCHEMATIC						
IC 66	TC4053BP		16					7, 8
IC 68	TC4001BP	14						7
IC 69	TC4030BP	14						7
IC 70	TC4071BP	14						7
IC 71	μPC4558C		8					4
IC 72	μPC358C		8					4
IC 73	μPC358C	8						4
IC 75	TC4050BP	1						8
IC 76	NJM4558D			8	4			
IC 77	TC4081BP	14						7
IC 80	NJM2903D		8					4
IC 81	μPC324C		4					11
IC 82	BX1154	REFER TO SCHEMATIC						
IC 83	HD14538BP	16						8
IC 84	HD14538BP	16						8
IC 85	TC4025BP	14						7
IC 86	TC4069UBP	14						7
IC 87	NJM2903D	8						4
IC 88	TC4066BP	14						7
IC 89	TC4011BP	14						7
IC 91	NJM2903D	8						4
IC 92	TC4520BP	16						8
IC 93	TC4069UBP	14						7
IC 95	HD14538BP	16						8
IC 96	NJM2903D	8						4
IC 97	CX194B	REFER TO SCHEMATIC						
IC 98	HD14538BP	16						8
IC 99	TC4053BP	16						7, 8
IC 102	TC4071BP	14						7
IC 103	TC4053BP		16					7, 8
IC 104	TC4066BP	14						7
IC 110	TC4094BP	16						8
IC 111	TC4069UBP	14						7
IC 112	HD14538BP	16						8
IC 113	MC14046BCP	16						8
IC 114	HD14538BP	16						8
IC 116	TC4013BP	14						7
IC 117	μPC324C	4				11		
IC 118	TC4516BP	16						8
IC 119	TC4516BP	16						8
IC 120	TC4081BP	14						7
IC 121	TC4030BP	14						7
IC 123	TC4053BP	16					7	8
IC 124	TC4053BP	16						7, 8
IC 125	TC4073BP	14						7
IC 126	NJM2903D	8						4
IC 127	MB8850I-207L	42						21
IC 128	TC4013BP	14						7

SV-55 (1/3) (SERVO SYSTEM)



NOTE:

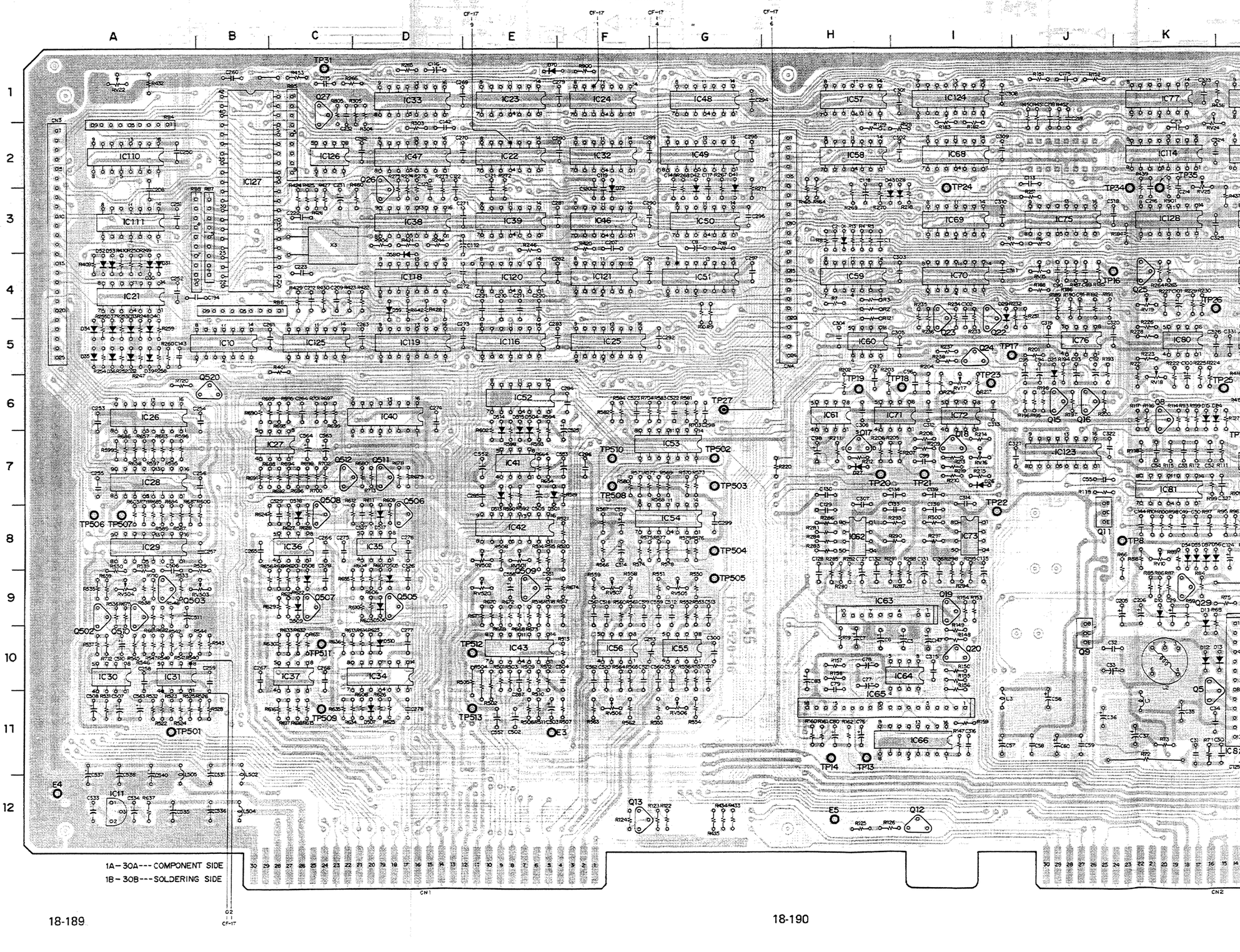
MARK	CHANGE INFORMATION	SERIAL NO.
※1	C15 0.022 ADDED	P: 11041 ~
		S: 10036 ~
※2	RV14 5K → 10K	P: 11273 ~
		S: 10059 ~
※3	D80 1SS119 ADDED	P: 11482 ~
		S: 10062 ~


DRUM MOTOR PWM / DRIVER
PICTURE SPRITING COMPENSATOR
CAPSTAN MOTOR PWM / DRIVER
CAPSTAN SEARCH CONTROL
CAPSTAN BRAKE CONTROL
CAPSTAN STOP SERVO
CAPSTAN DIRECTION CONTROL
SPEED SERVO
PHASE SERVO
SERVO
SPEED COUNTER
PWM
PHASE COMPARATOR
VCO
LOCK DET
PHASE COUNTER
1/2H MMV
FF
FRAM-ING
INT VD GEN
V BLK PULSE
SYNC DET
SPEED DET
LPF
MUTE
MOTOR DRIVER
DRUM ON 2/3
VIDEO EE 2/3
CAPSTAN STILL 2/3
CAPSTAN SPEED 3/3
CAPSTAN 4FG OUT 1-19B
CAPSTAN F/R CONTROL 2-17B
Vcc (DRUM) 2-19A DRUM MOTOR
DRUM ERROR OUT 2-18A DRUM MOTOR
GND (DRUM) 2-17A DRUM MOTOR
UNREG GND (DRUM) 2-16A UR-09, 2-8
Vcc (CAPSTAN) 2-19B CAPSTAN MOTOR
CAPSTAN ERROR OUT 2-18B CAPSTAN MOTOR
GND (CAPSTAN) 2-16B CAPSTAN MOTOR
UNREG GND (CAPSTAN) 2-15A UR-09, 2-7
UNREG GND (CAPSTAN) 2-13B CAPSTAN MOTOR
SYNCHRONIZE IN 1-25A SY-4, 13-23A
H; SLOW 2/3
H; SLOW 3/3
CAP SEARCH 2/3
L; INSTANT START 2/3
INST START DRIVE 2/3
L; DRUM LOCK 3/3
L; DRUM LOCK 2/3
L; CAP LOCK 2/3
2/3 SHAPED FG (8)
2/3 CAPSTAN ON
2/3 CAPSTAN REV
2/3 REV/FWD CONT
IC97(1/3)
IC97(2/3)
IC97(3/3)
IC82
IC113
IC124
IC99
IC49
Q5 2SD882
Q29 2SC2603
Q9 2SC680
Q11 2SB856
Q8 2SC2603
Q16 2SC2878
Q25 2SC2603
Q15 2SC2603
Q22 2SC2603
Q24 2SC2878
Q23 2SC2603
Q17 2SK43
Q18 2SC2603
TP4
TP9
TP10
TP11
TP16
TP17
TP18
TP19
TP20
TP21
TP22
TP23
TP24
TP30
TP31
TP32
TP33
SV-55 (1/3)
DRUM, CAPSTAN SERVO
1-611-320-16
BVW-40P

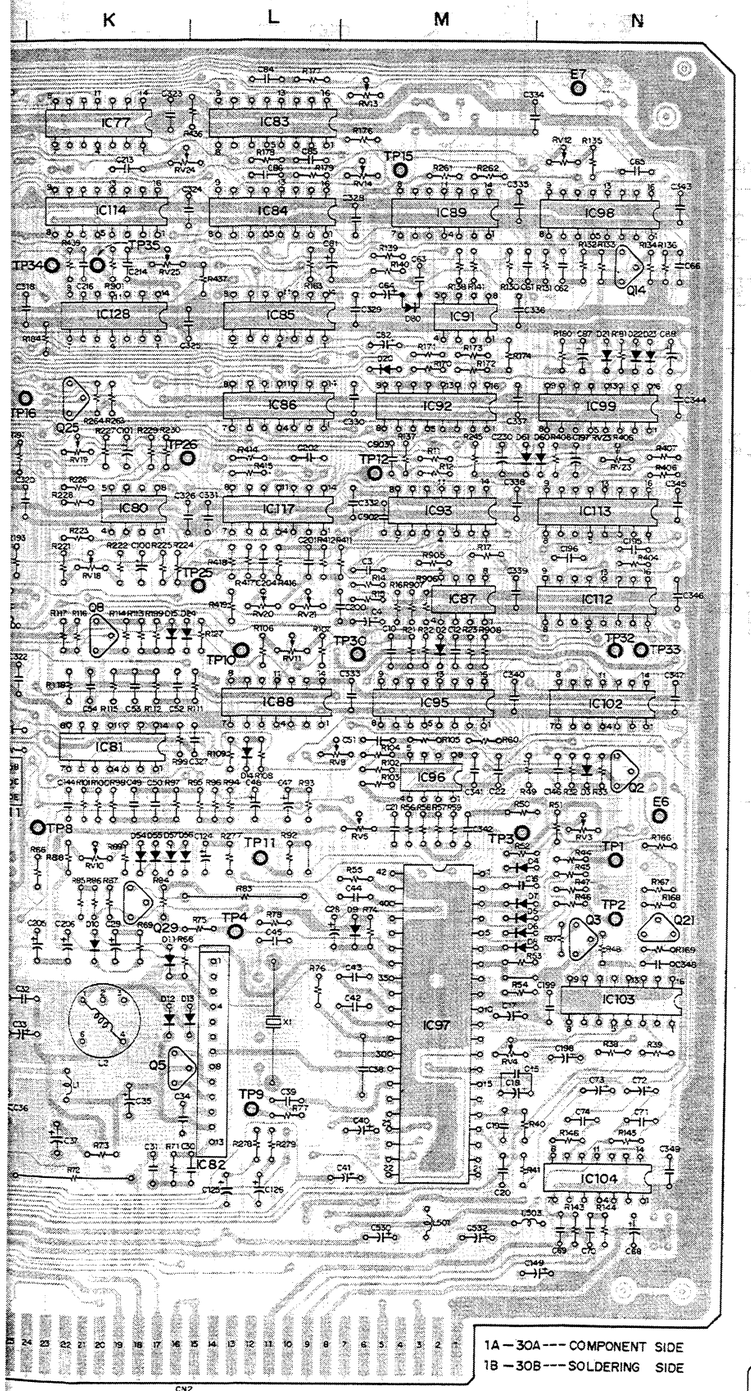
SV-55, SV-60, CF-17

SV-55 (SERVO SYSTEM)
SV-60
CF-17

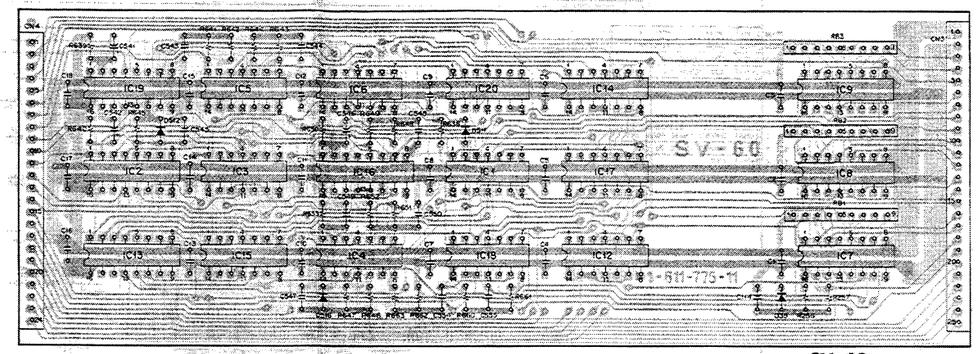
CN1	D - 12	IC39	E - 3	Q27	C - 1		
CN2	L - 12	IC40	D - 6	Q29	K - 9		
CN3	A - 2	IC41	E - 7	Q502	A - 9		
CN4	H - 3	IC42	E - 8	Q503	A - 9		
		IC43	E - 10	Q505	D - 9		
D1	H - 3	IC46	F - 3	Q506	D - 8		
D2	M - 7	IC47	D - 2	Q507	C - 9		
D3	N - 8	IC48	G - 1	Q508	C - 8		
D4	N - 9	IC49	G - 2	Q509	E - 9		
D5	N - 9	IC50	G - 3	Q510	A - 9		
D6	N - 9	IC51	G - 4	Q511	D - 7		
D7	N - 9	IC52	E - 6	Q512	C - 7		
D8	N - 9	IC53	G - 7	Q520	B - 6		
D9	M - 9	IC54	G - 8				
D10	K - 9	IC55	G - 10	RB4	A - 2		
D11	K - 10	IC56	F - 10	RB5	C - 2		
D12	K - 10	IC57	H - 1	RB6	B - 4		
D13	L - 10	IC58	H - 2	RB7	B - 3		
D14	L - 8	IC59	H - 4	RB8	B - 3		
D15	K - 6	IC60	H - 5				
D20	M - 4	IC61	H - 6	RV3	N - 8		
D21	N - 3	IC62	H - 8	RV4	M - 11		
D22	N - 3	IC63	H - 9	RV5	M - 8		
D23	N - 3	IC64	I - 10	RV9	M - 7		
D24	L - 6	IC65	H - 11	RV10	K - 8		
D25	J - 6	IC66	I - 11	RV11	L - 7		
D26	I - 7	IC68	I - 2	RV12	N - 1		
D27	H - 7	IC69	I - 3	RV13	M - 1		
D28	I - 3	IC70	I - 4	RV14	M - 2		
D29	I - 5	IC71	I - 6	RV15	J - 4		
D30	A - 4	IC72	I - 6	RV16	I - 7		
D31	A - 4	IC73	I - 8	RV17	I - 6		
D32	A - 5	IC75	J - 3	RV18	K - 6		
D33	A - 5	IC76	J - 5	RV19	K - 4		
D34	A - 5	IC77	K - 1	RV20	L - 6		
D35	A - 5	IC80	K - 5	RV21	L - 6		
D36	A - 5	IC81	K - 7	RV22	A - 1		
D37	A - 5	IC82	L - 11	RV23	N - 4		
D39	A - 5	IC83	L - 1	RV24	K - 2		
D40	A - 5	IC84	L - 2	RV25	K - 2		
D41	G - 3	IC85	L - 3	RV501	E - 8		
D42	G - 3	IC86	L - 4	RV502	E - 8		
D43	I - 3	IC87	M - 6	RV503	B - 9		
D52	A - 4	IC88	L - 7	RV504	A - 9		
D53	A - 4	IC89	M - 2	RV505	G - 9		
D54	K - 8	IC91	M - 3	RV506	G - 11		
D55	K - 8	IC92	M - 4	RV507	F - 9		
D56	L - 8	IC93	M - 5	RV508	F - 11		
D57	K - 8	IC95	M - 7	RV520	E - 9		
D58	D - 4	IC96	M - 8				
D59	D - 4	IC97	M - 10	TP1	N - 8		
D60	N - 4	IC98	N - 2	TP2	N - 9		
D61	M - 4	IC99	N - 4	TP3	M - 8		
D70	E - 1	IC102	N - 7	TP4	L - 9		
D72	F - 3	IC103	N - 10	TP8	K - 8		
D80	M - 3	IC104	N - 11	TP9	L - 11		
D501	E - 7	IC110	A - 2	TP10	L - 7		
D504	E - 7	IC111	A - 3	TP11	L - 8		
D505	D - 9	IC112	N - 6	TP12	M - 5		
D506	D - 9	IC113	N - 5	TP13	H - 11		
D507	D - 11	IC114	K - 2	TP14	H - 11		
D508	C - 9	IC115	J - 2	TP15	M - 2		
D509	C - 9	IC116	E - 5	TP16	K - 4		
D510	D - 10	IC117	L - 5	TP17	J - 5		
D513	E - 7	IC118	D - 4	TP18	I - 6		
D514	E - 7	IC119	D - 5	TP19	H - 6		
D515	E - 7	IC120	E - 4	TP20	H - 7		
D517	D - 8	IC121	F - 4	TP21	I - 7		
D518	C - 8	IC123	J - 7	TP22	I - 8		
		IC124	I - 1	TP23	I - 6		
E3	E - 11	IC125	C - 5	TP24	I - 3		
E4	A - 12	IC126	C - 2	TP25	L - 6		
E5	H - 12	IC127	B - 2	TP26	L - 4		
E6	N - 8	IC128	K - 3	TP27	G - 6		
E7	N - 1			TP30	M - 7		
		Q2	N - 3	TP31	C - 1		
IC10	B - 5	Q3	N - 9	TP32	N - 7		
IC11	A - 12	Q5	L - 11	TP33	N - 7		
IC21	A - 4	Q6	K - 6	TP34	K - 3		
IC22	B - 2	Q8	J - 10	TP35	K - 3		
IC23	B - 1	Q11	J - 8	TP501	A - 11		
IC24	B - 1	Q12	I - 12	TP502	G - 7		
IC25	F - 5	Q13	F - 12	TP503	G - 7		
IC26	A - 6	Q14	N - 3	TP504	G - 8		
IC27	C - 7	Q15	J - 6	TP505	G - 9		
IC28	A - 7	Q16	J - 6	TP506	A - 8		
IC29	A - 8	Q17	H - 7	TP507	A - 8		
IC30	A - 10	Q18	I - 7	TP508	F - 7		
IC31	A - 10	Q19	I - 9	TP509	C - 11		
IC32	F - 2	Q20	I - 10	TP510	F - 7		
IC33	D - 1	Q21	N - 9	TP511	C - 10		
IC34	D - 10	Q22	I - 5	TP512	E - 10		
IC35	D - 8	Q23	I - 5	TP513	E - 11		
IC36	C - 8	Q24	I - 5				
IC37	C - 10	Q25	K - 4	X1	L - 10		
IC38	D - 3	Q26	D - 3	X3	C - 3		



SV-55, SV-60, CF-17



SV-55—SOLDERING SIDE—
1-611-520-16
BVW-40P



SV-60—SOLDERING SIDE—
1-611-775-11
BVW-40P

SV-55

Ref. No.	Type	Pin No. +5V	+12V	+15V	−5V	−12V	−15V	GND
IC 10	SN74LS37A	14						7
IC 11	NJM78L05A	REFER TO SCHEMATIC						
IC 21	MC14584BCP	14						7
IC 22	TC1071BP	14						7
IC 23	TC1069LBP	14						7
IC 24	TC4073BP	14						7
IC 25	TC1021BP	16						8
IC 26	TC4051BP	16			7			8
IC 27	μPC358C	8						4
IC 28	TC4051BP	16			7			8
IC 29	HD14538BP	16						8
IC 30	μPC358C	8						4
IC 31	NJM2903D	8						4
IC 32	TC4001BP	14						7
IC 33	HD14538BP	16						8
IC 34	μPC324C			8			4	
IC 35	μPC358C			8			4	
IC 36	μPC358C			8			4	
IC 37	NJM4558D-FA			8			4	
IC 38	HD14538BP	16						8
IC 39	TC1069LBP	14						7
IC 10	TC5067BP	16						8
IC 11	μPC4558C		8		4			
IC 12	TC1053BP	16						7, 8
IC 43	μPC324C		4					11
IC 46	TC4081BP	14						7
IC 47	TC4053BP	16						7, 8
IC 48	TC1071BP	14						7
IC 49	TC4053BP	16						7, 8
IC 50	TC4201BP	14						7
IC 51	HD14538BP	16						8
IC 52	TC4012BP	14						7
IC 53	TC4030BP	14						7
IC 54	μPC395C		8					4
IC 55	μPC4558C		8					4
IC 56	μPC4558C		8					4
IC 57	TC1069LBP	14						7
IC 58	TC1069LBP	14						7
IC 59	TC4011BP	14						7
IC 60	μPC4558C			8	4			
IC 61	NJM2903D		8					4
IC 62	μPC358C	8						4
IC 63	BX3915A	REFER TO SCHEMATIC						
IC 64	NJM4558D-D		8					4
IC 65	BX3914	REFER TO SCHEMATIC						
IC 66	TC4053BP		16					7, 8
IC 68	TC4001BP	14						7

SV-55

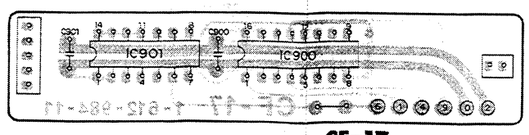
Ref. No.	Type	Pin No. +3V	+12V	+15V	−5V	−12V	−15V	GND
IC 69	TC1030BP	14						7
IC 70	TC1071BP	14						7
IC 71	μPC4558C		8					4
IC 72	μPC358C		8					4
IC 73	μPC358C	8						4
IC 75	TC1030BP	1						8
IC 76	NJM1558D			8	4			
IC 77	TC4081BP	14						7
IC 80	NJM2903D		8					4
IC 81	μPC324C		4					11
IC 82	BX1154	REFER TO SCHEMATIC						
IC 83	HD14538BP	16						8
IC 84	HD14538BP	16						8
IC 85	TC4052BP	14						7
IC 86	TC1069LBP	14						7
IC 87	NJM2903D	8						4
IC 88	TC1066BP	14						7
IC 89	TC4011BP	14						7
IC 91	NJM2903D	8						4
IC 92	TC4538BP	16						8
IC 93	TC1066LBP	14						7
IC 95	HD14538BP	16						8
IC 96	NJM2903D	8						4
IC 97	CX194B	REFER TO SCHEMATIC						
IC 98	HD14538BP	16						8
IC 99	TC4053BP	16						7, 8
IC 102	TC4071BP	14						7
IC 103	TC4053BP	16						7, 8
IC 104	TC4066BP	14						7
IC 110	TC4094BP	16						8
IC 111	TC4069UBP	14						7
IC 112	HD14538BP	16						8
IC 113	MC14569BCP	16						8
IC 114	HD14538BP	16						8
IC 116	TC4013BP	14						7
IC 117	μPC324C	4				11		
IC 118	TC4516BP	16						8
IC 119	TC4516BP	16						8
IC 120	TC4081BP	14						7
IC 121	TC1030BP	14						7
IC 122	TC4053BP	16				7		8
IC 124	TC4053BP	16						7, 8
IC 125	TC4073BP	14						7
IC 126	NJM2903D	8						4
IC 127	MB88501-207L	42						21
IC 128	TC4013BP	14						7

SV-60

Ref. No.	Type	Pin No. −5V	GND
IC 1	TC4081BP	14	7
IC 2	TC4532BP	16	8
IC 3	TC4081BP	14	7
IC 4	TC4081BP	14	7
IC 5	TC1030BP	14	7
IC 6	TC1071BP	14	7
IC 7	TC4094BP	16	8
IC 8	TC4094BP	16	8
IC 12	TC4011BP	14	7
IC 13	TC4532BP	16	8
IC 14	TC4073BP	14	7
IC 15	TC4081BP	14	7
IC 16	HD14538BP	16	8
IC 17	TC1069LBP	14	7
IC 18	TC4073BP	14	7
IC 19	HD14538BP	16	8
IC 20	TC4071BP	14	7

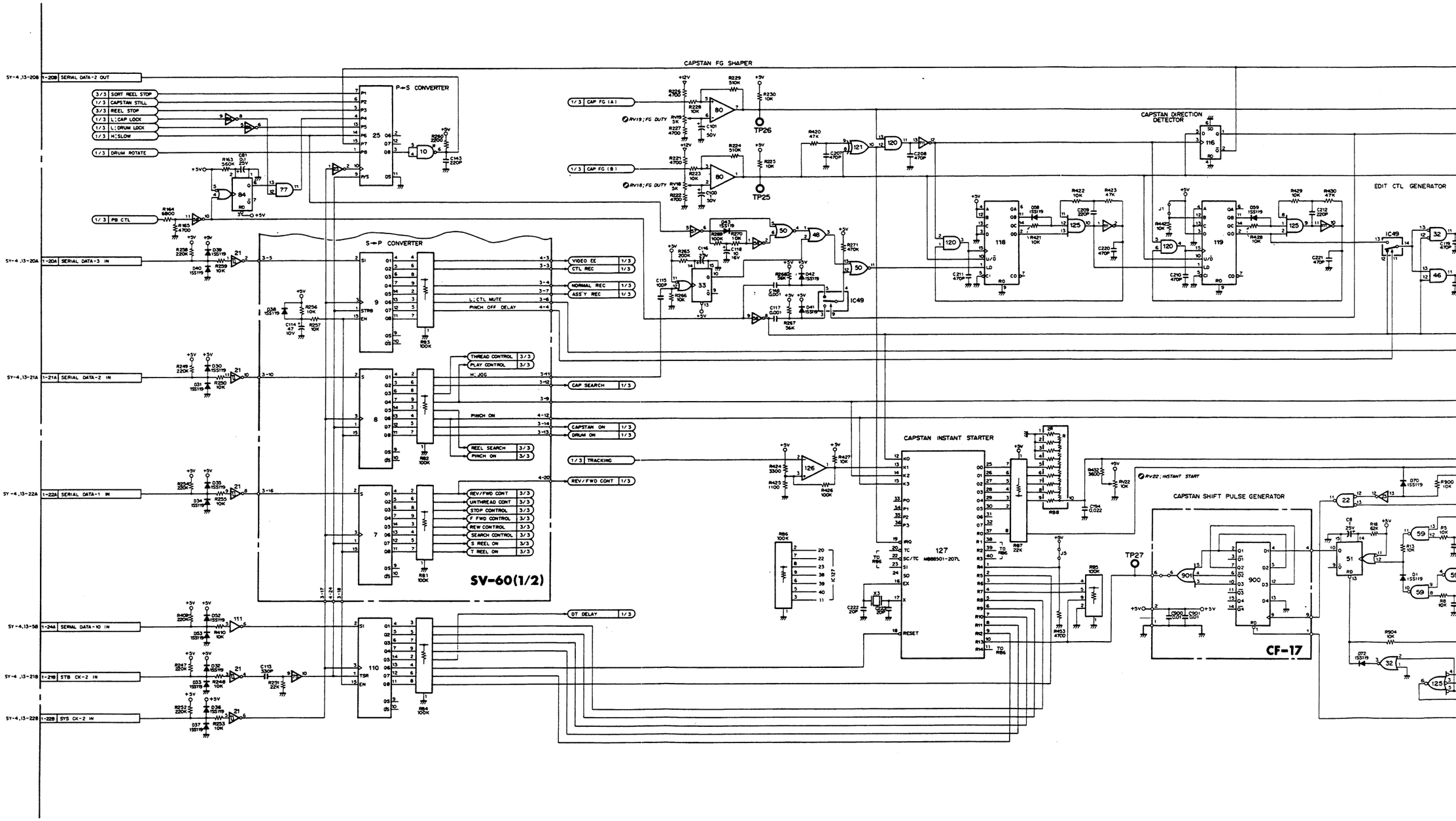
CF-17

Ref. No.	Type	Pin No. +5V	GND
IC 900	TC4017BP	16	8
IC 901	TC4073BP	14	7

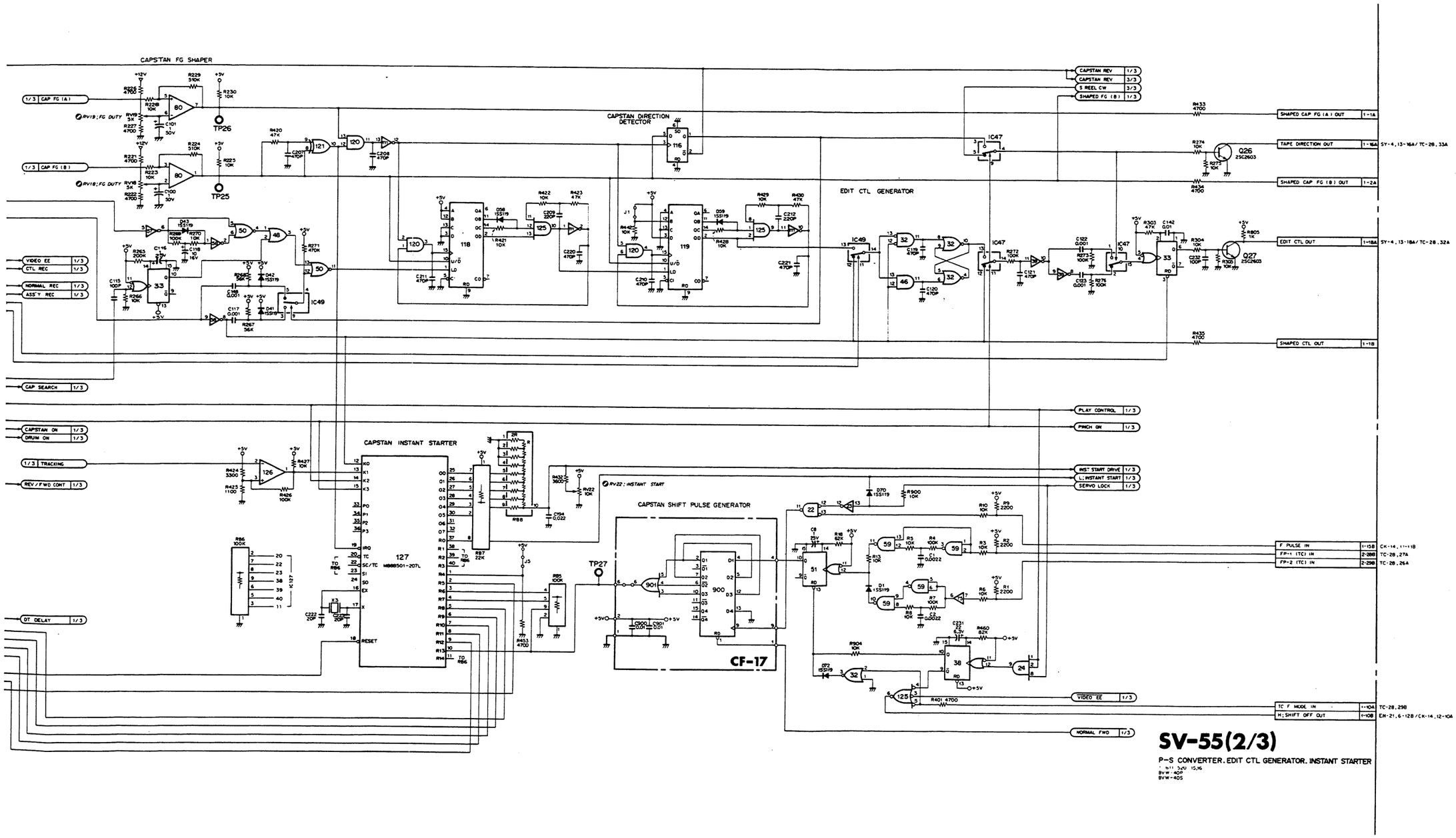


CF-17—COMPONENT SIDE—
1-612-984-11
BVW-40P

SV-55 (2/3) (SERVO SYSTEM)
SV-60 (1/2)
CF-17



SV-55 (2/3), SV-60 (1/2), CF-17



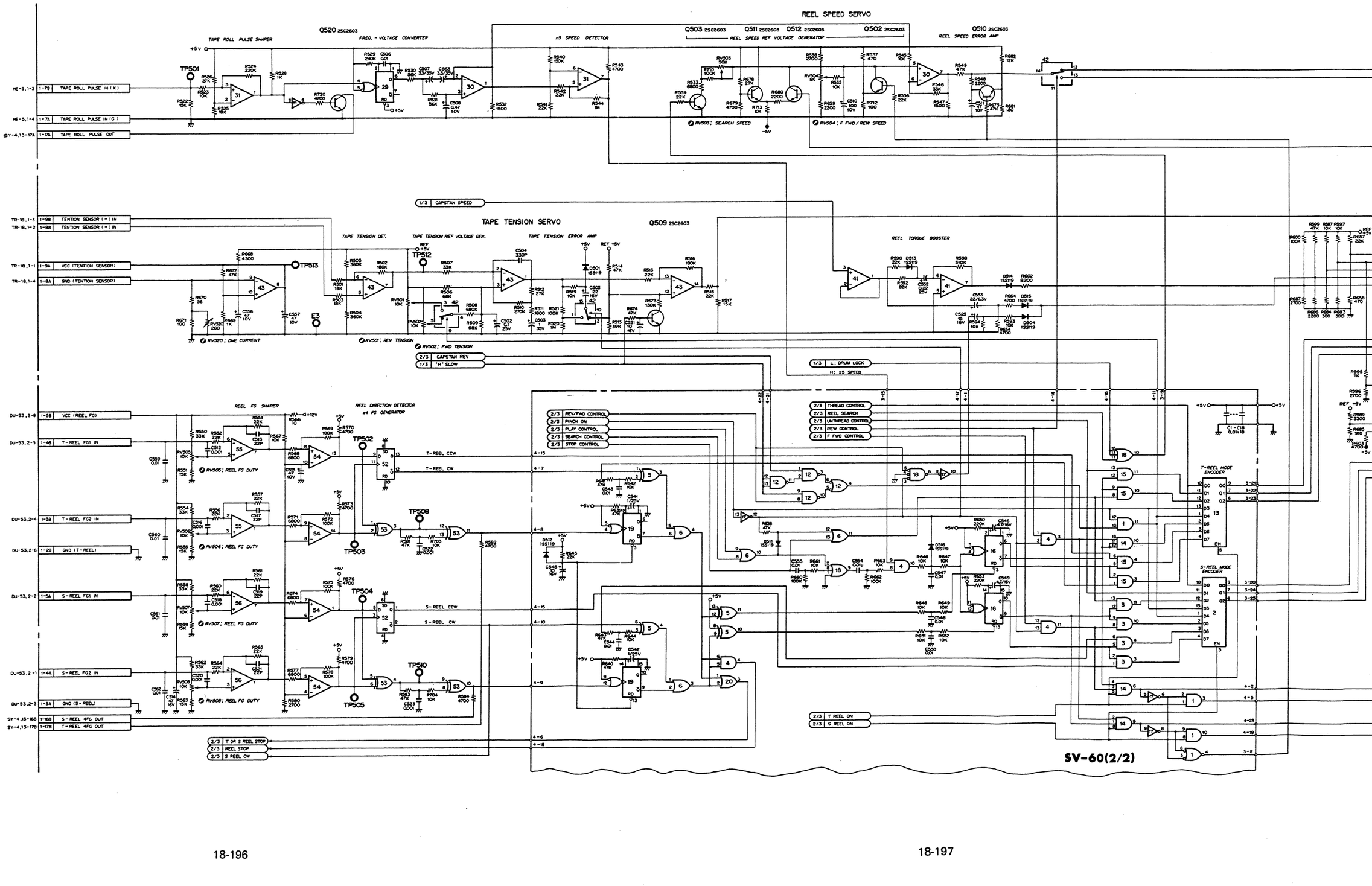
SV-55(2/3)

P-S CONVERTER. EDIT CTL GENERATOR. INSTANT STARTER

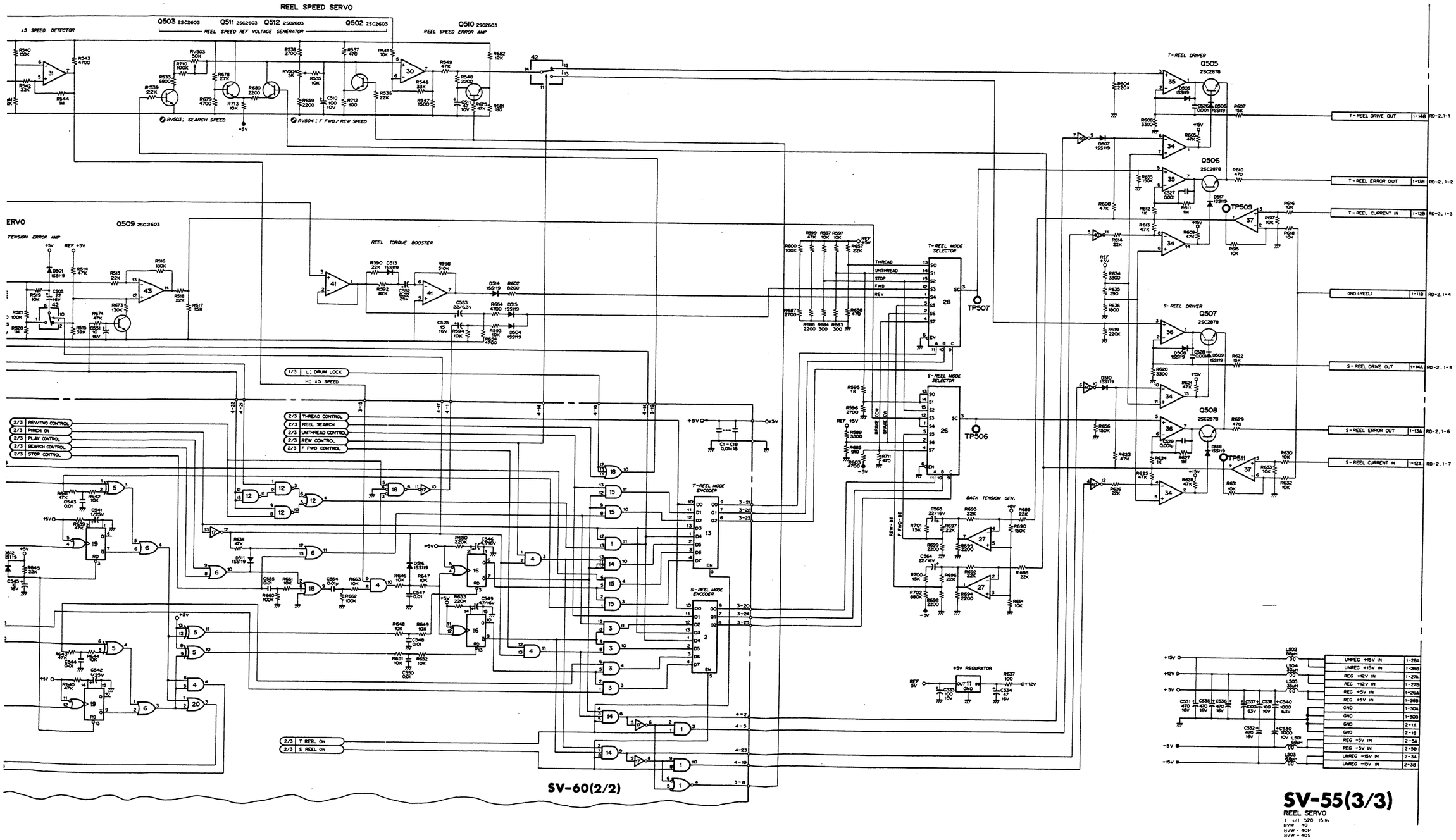
for SV-55 (1/2), SV-60 (1/2), SV-55 (3/3), SV-60 (3/3), SV-55 (1/3), SV-60 (1/3), SV-W-405, SV-W-405

SV-55 (3/3), SV-60 (2/2)

SV-55 (3/3) (SERVO SYSTEM)
SV-60 (2/2)



SV-55 (3/3), SV-60 (2/2)



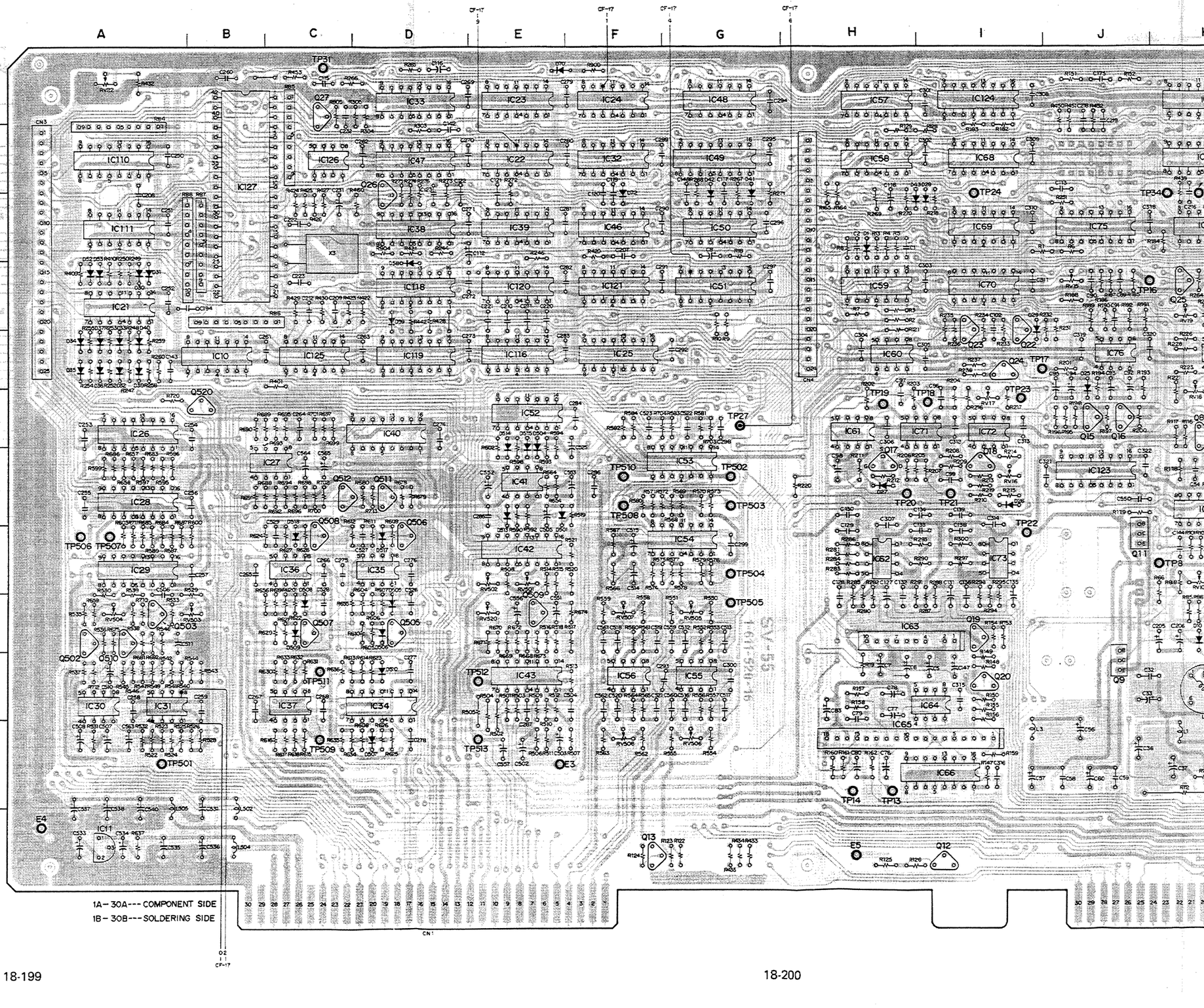
SV-60(2/2)

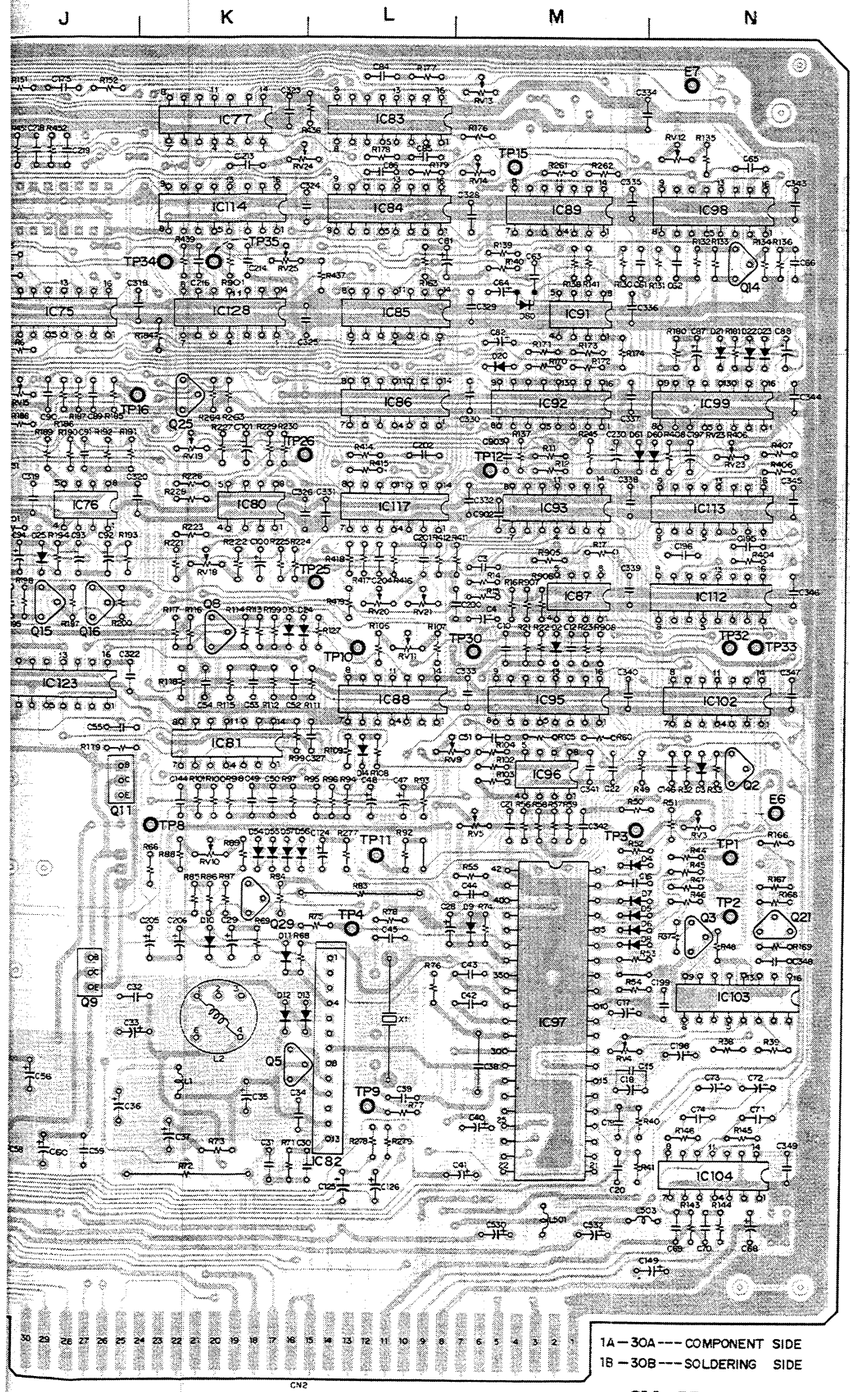
SV-55(3/3)

REEL SERVO

SV-55 (SERVO SYSTEM)
SV-60

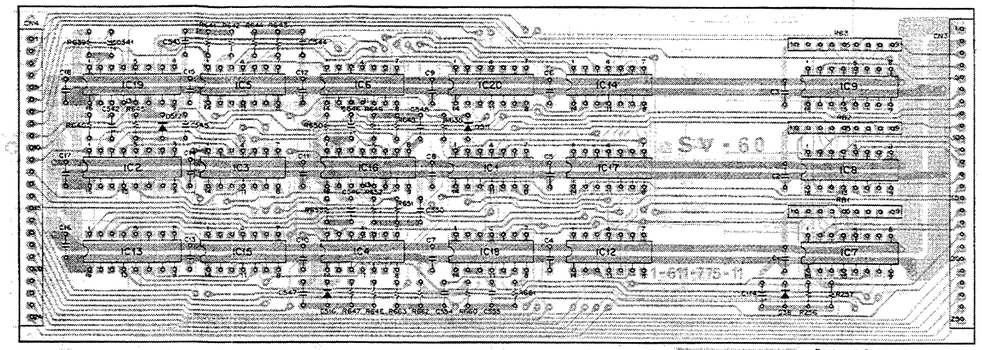
CN1	D - 12	IC39	E - 3	Q27	C - 1
CN2	L - 12	IC40	D - 6	Q29	K - 9
CN3	A - 2	IC41	E - 7	Q502	A - 9
CN4	H - 3	IC42	E - 8	Q503	A - 9
		IC43	E - 10	Q505	D - 9
D1	H - 3	IC46	F - 3	Q506	D - 8
D2	M - 7	IC47	D - 2	Q507	C - 9
D3	N - 8	IC48	G - 1	Q508	C - 8
D4	N - 9	IC49	G - 2	Q509	B - 9
D5	N - 9	IC50	G - 3	Q510	A - 9
D6	N - 9	IC51	G - 4	Q511	D - 7
D7	N - 9	IC52	E - 6	Q512	C - 7
D8	N - 9	IC53	G - 7	Q520	B - 6
D9	M - 9	IC54	G - 8		
D10	K - 9	IC55	G - 10	RB4	A - 2
D11	K - 10	IC56	F - 10	RB5	C - 2
D12	K - 10	IC57	H - 1	RB6	B - 4
D13	L - 10	IC58	H - 2	RB7	B - 3
D14	L - 8	IC59	H - 4	RB8	B - 3
D15	K - 6	IC60	H - 5		
D20	M - 4	IC61	H - 6	RV3	N - 8
D21	N - 3	IC62	H - 8	RV4	M - 11
D22	N - 3	IC63	H - 9	RV5	M - 8
D23	N - 3	IC64	I - 10	RV9	M - 7
D24	L - 6	IC65	H - 11	RV10	K - 8
D25	J - 6	IC66	I - 11	RV11	L - 7
D26	I - 7	IC68	I - 2	RV12	N - 1
D27	H - 7	IC69	I - 3	RV13	M - 1
D28	I - 3	IC70	I - 4	RV14	M - 2
D29	I - 5	IC71	J - 4	RV15	J - 4
D30	A - 4	IC72	I - 6	RV16	I - 7
D31	A - 4	IC73	I - 8	RV17	I - 6
D32	A - 5	IC75	J - 3	RV18	K - 6
D33	A - 5	IC76	J - 5	RV19	K - 4
D34	A - 5	IC77	K - 1	RV20	L - 6
D35	A - 5	IC80	K - 5	RV21	L - 6
D36	A - 5	IC81	K - 7	RV22	A - 1
D37	A - 5	IC82	L - 11	RV23	N - 4
D38	A - 5	IC83	L - 1	RV24	K - 2
D40	A - 5	IC84	L - 2	RV25	K - 2
D41	G - 3	IC85	L - 3	RV501	E - 8
D42	G - 3	IC86	L - 4	RV502	E - 8
D43	I - 3	IC87	M - 6	RV503	B - 9
D52	A - 4	IC88	L - 7	RV504	A - 9
D53	A - 4	IC89	M - 2	RV505	G - 9
D54	K - 8	IC91	M - 3	RV506	G - 11
D55	K - 8	IC92	M - 4	RV507	F - 9
D56	L - 8	IC93	M - 5	RV508	F - 11
D57	K - 8	IC95	M - 7	RV520	E - 9
D58	D - 4	IC96	M - 8		
D59	D - 4	IC97	M - 10	TP1	N - 8
D60	N - 4	IC98	N - 2	TP2	N - 9
D61	M - 4	IC99	N - 4	TP3	M - 8
D70	F - 1	IC102	N - 7	TP4	L - 9
D72	F - 3	IC103	N - 10	TP8	K - 8
D80	M - 3	IC104	N - 11	TP9	L - 11
D501	E - 7	IC110	A - 2	TP10	L - 7
D504	E - 7	IC111	A - 3	TP11	L - 8
D505	D - 9	IC112	N - 6	TP12	M - 5
D506	D - 9	IC113	N - 5	TP13	H - 11
D507	D - 11	IC114	K - 2	TP14	H - 11
D508	C - 9	IC115	J - 2	TP15	M - 2
D509	C - 9	IC116	E - 5	TP16	K - 4
D510	D - 10	IC117	L - 5	TP17	J - 5
D513	E - 7	IC118	D - 4	TP18	L - 6
D514	E - 7	IC119	D - 5	TP19	H - 6
D515	E - 7	IC120	E - 4	TP20	H - 7
D517	D - 8	IC121	F - 4	TP21	L - 7
D518	C - 8	IC123	J - 7	TP22	I - 8
		IC124	I - 1	TP23	I - 6
E3	E - 11	IC125	C - 5	TP24	I - 3
E4	A - 12	IC126	C - 2	TP25	L - 6
E5	H - 12	IC127	B - 2	TP26	L - 4
E6	N - 8	IC128	K - 3	TP27	G - 6
E7	N - 1			TP30	M - 7
		Q2	N - 8	TP31	C - 1
IC10	B - 5	Q3	N - 9	TP32	N - 7
IC11	A - 12	Q4	L - 11	TP33	N - 7
IC21	A - 4	Q8	K - 6	TP34	K - 3
IC22	E - 2	Q9	J - 10	TP35	K - 3
IC23	E - 1	Q11	J - 8	TP501	A - 11
IC24	F - 1	Q12	L - 12	TP502	G - 7
IC25	F - 5	Q13	F - 12	TP503	G - 7
IC26	A - 6	Q14	N - 3	TP504	G - 8
IC27	C - 7	Q15	J - 6	TP505	G - 9
IC28	A - 7	Q16	J - 6	TP506	A - 8
IC29	A - 8	Q17	H - 7	TP507	A - 8
IC30	A - 10	Q18	I - 7	TP508	F - 7
IC31	A - 10	Q19	I - 9	TP509	C - 11
IC32	F - 2	Q20	I - 10	TP510	F - 7
IC33	D - 1	Q21	N - 9	TP511	C - 10
IC34	D - 10	Q22	I - 5	TP512	E - 10
IC35	D - 6	Q23	I - 5	TP513	E - 11
IC36	C - 8	Q24	I - 5		
IC37	C - 10	Q25	K - 4	X1	L - 10
IC38	D - 3	Q26	D - 3	X3	C - 3





1A—30A --- COMPONENT SIDE
1B—30B --- SOLDERING SIDE

SV-55-SOLDERING SIDE-
1-611-520-16
SVW-40P



SV-60-SOLDERING SIDE-
1-611-775-11
SVW-40
SVW-40P

SV - 55

Ref. No.	Type	Pin No. +5V	+12V	+15V	−5V	−12V	−15V	GND
IC 10	SN74LS87N	14						7
IC 11	NJM78L05A	REFER TO SCHEMATIC						
IC 21	MC14581BCP	11						7
IC 22	TC4072BP	14						7
IC 23	TC4069UBP	14						7
IC 24	TC4072BP	14						7
IC 25	TC4021BP	16						8
IC 26	TC4081BP	16		7				8
IC 27	μPC358C	8						4
IC 28	TC4081BP	16		7				8
IC 29	HD14538BP	16						8
IC 30	μPC358C	8						4
IC 31	NJM2902D	3						1
IC 32	TC4001BP	14						7
IC 33	HD14538BP	16						8
IC 34	μPC339C			8			3	
IC 35	μPC339C			8			4	
IC 36	μPC358C			8			4	
IC 37	NJM4558D-FA			8			4	
IC 38	HD14538BP	16						8
IC 39	TC4069UBP	14						7
IC 40	TC5087BP	16						8
IC 41	μPC4558C		8		4			
IC 42	TC4033BP	16						7, 8
IC 43	μPC324C		4					11
IC 46	TC4081BP	14						7
IC 47	TC4033BP	16						7, 8
IC 48	TC4071BP	14						7
IC 49	TC4033BP	16						7, 8
IC 50	TC4001BP	14						7
IC 51	HD14538BP	16						8
IC 52	TC4013BP	14						7
IC 53	TC4032BP	14						7
IC 54	μPC339C		8					4
IC 55	μPC1558C		8					4
IC 56	μPC4558C		8					4
IC 57	TC4069UBP	14						7
IC 58	TC4069UBP	14						7
IC 59	TC4011BP	14						7
IC 60	μPC4558C			8	4			
IC 61	NJM2903D		8					4
IC 62	μPC358C	8						4
IC 82	BX3915A	REFER TO SCHEMATIC						
IC 84	NJM4558D-D		8					4
IC 85	BX3911	REFER TO SCHEMATIC						
IC 86	TC4033BP		16					7, 8
IC 88	TC4001BP	14						7

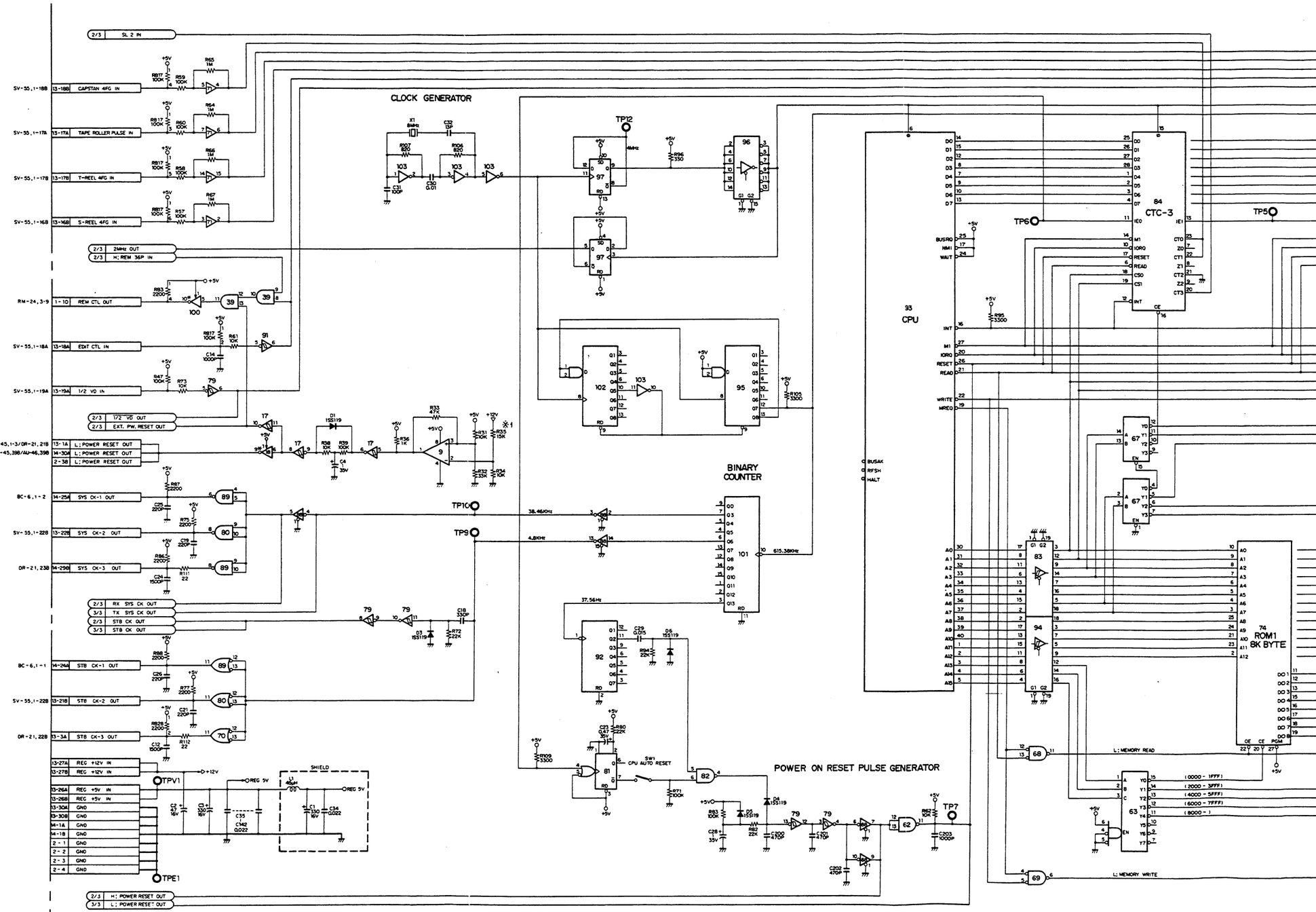
SV - 55

Ref. No.	Type	Pin No. +5V	+12V	+15V	−5V	−12V	−15V	GND
IC 89	TC4020BP	14						7
IC 70	TC4071BP	14						7
IC 71	μPC1558C		8					4
IC 72	μPC358C		8					4
IC 73	μPC358C	8						4
IC 75	TC4030BP	1						9
IC 76	NJM4558D			8	4			
IC 77	TC4081BP	14						7
IC 80	NJM2903D		8					4
IC 81	μPC324C			4				11
IC 82	BX3154	REFER TO SCHEMATIC						
IC 83	HD14538BP	16						8
IC 84	HD14538BP	16						8
IC 85	TC4025BP	14						7
IC 86	TC4069UBP	14						7
IC 87	NJM2902D	3						1
IC 88	TC4066BP	14						7
IC 89	TC4011BP	14						7
IC 91	NJM2903D	3						1
IC 92	TC4536BP	16						8
IC 93	TC4069UBP	14						7
IC 95	HD14538BP	16						8
IC 96	NJM2903D	3						1
IC 97	CX194B	REFER TO SCHEMATIC						
IC 98	HD14538BP	16						8
IC 99	TC4033BP	16						7, 8
IC 102	TC4071BP	14						7
IC 103	TC4033BP			16				7, 8
IC 104	TC4066BP	14						7
IC 110	TC4094BP	16						8
IC 111	TC4069UBP	14						7
IC 112	HD14538BP	16						8
IC 113	MC14046BCP	16						8
IC 114	HD14538BP	16						8
IC 116	TC4013BP	14						7
IC 117	μPC324C	4			11			
IC 118	TC4516BP	16						8
IC 119	TC4516BP	16						8
IC 120	TC4081BP	14						7
IC 121	TC4050BP	14						7
IC 123	TC4050BP	16				7		8
IC 124	TC4053BP	16						7, 8
IC 125	TC4073BP	14						7
IC 126	NJM2903D	8						4
IC 127	MB88501-207L	42						21
IC 128	TC4013BP	14						7

SV - 60

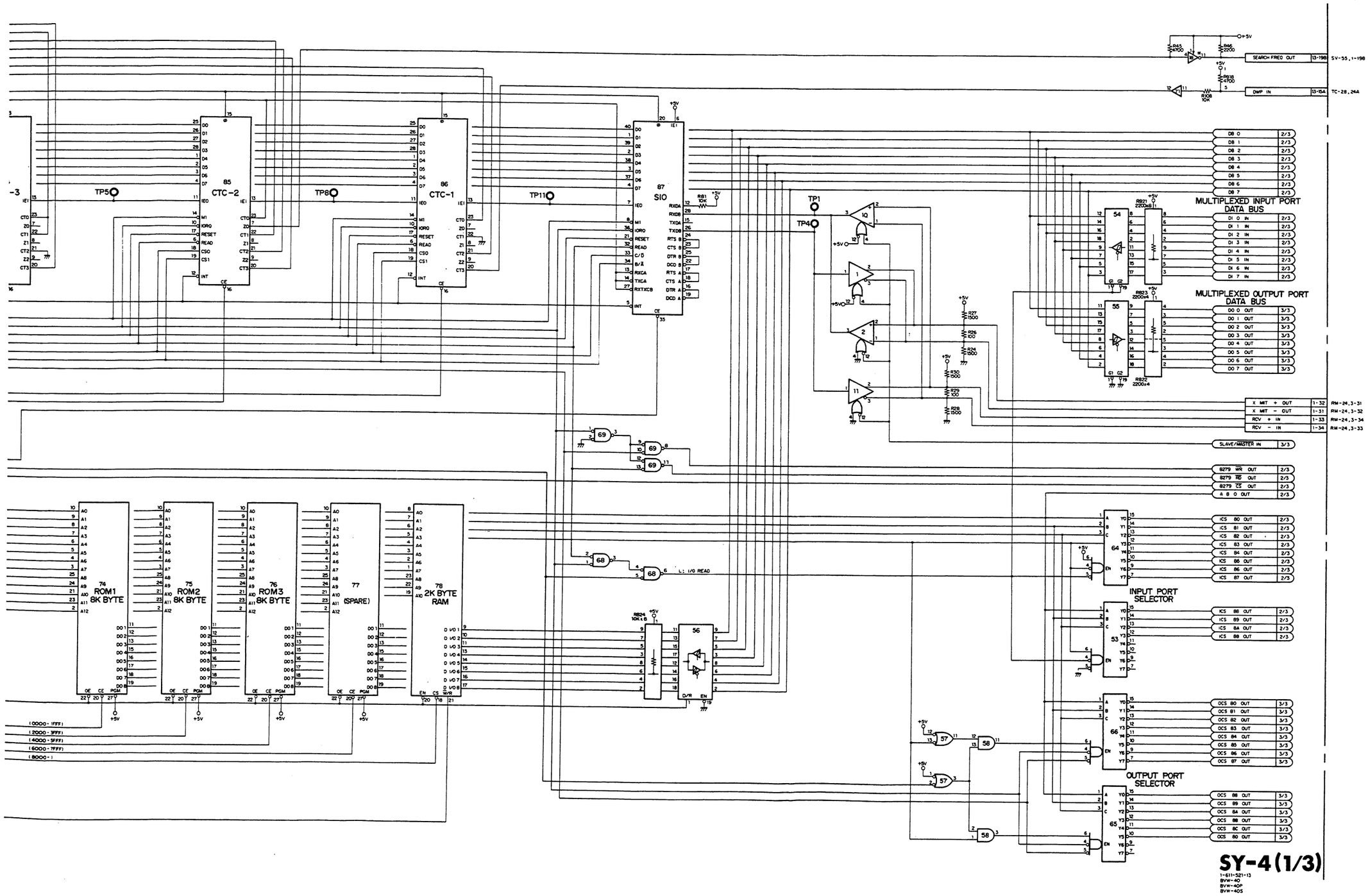
Ref. No.	Type	Pin No. +5V	GND
IC 1	TC4081BP	14	7
IC 2	TC4532BP	16	8
IC 3	TC4081BP	14	7
IC 4	TC4081BP	14	7
IC 5	TC4050BP	14	7
IC 6	TC4071BP	14	7
IC 7	TC4094BP	16	8
IC 8	TC4094BP	16	8
IC 9	TC4094BP	16	8
IC 12	TC4011BP	14	7
IC 13	TC4532BP	16	8
IC 14	TC4073BP	14	7
IC 15	TC4081BP	14	7
IC 16	HD14538BP	16	8
IC 17	TC4069UBP	14	7
IC 18	TC4075BP	14	7
IC 19	HD14538BP	16	8
IC 20	TC4071BP	14	7

SY-4 (1/3) (SYSTEM CONTROL)



NOTE:

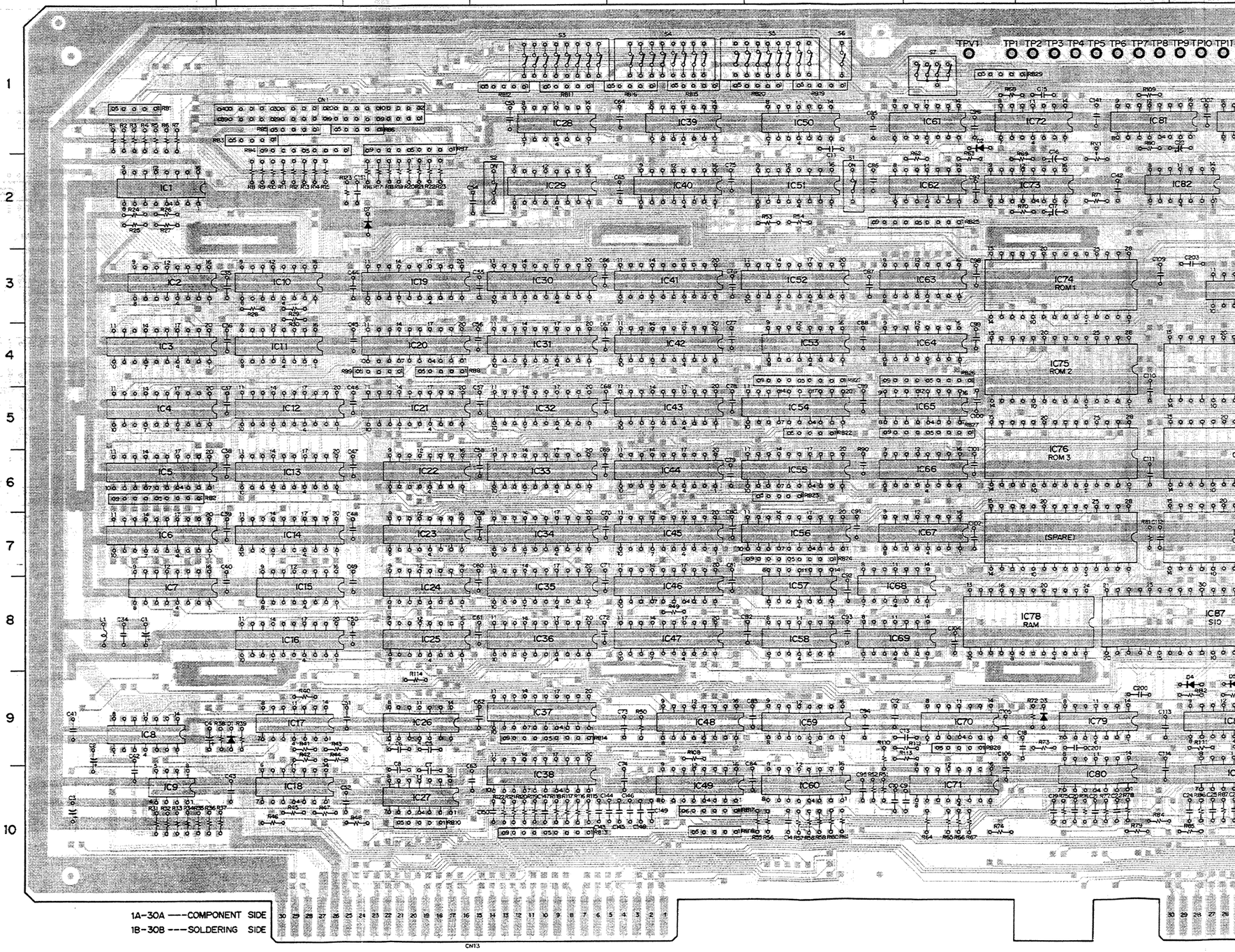
MARK	CHANGE INFORMATION	SERIAL NO.
※1	R35 16K → 15K	UC: 11031 ~ J: 10476 ~ P: 10711 ~ S: 10011 ~

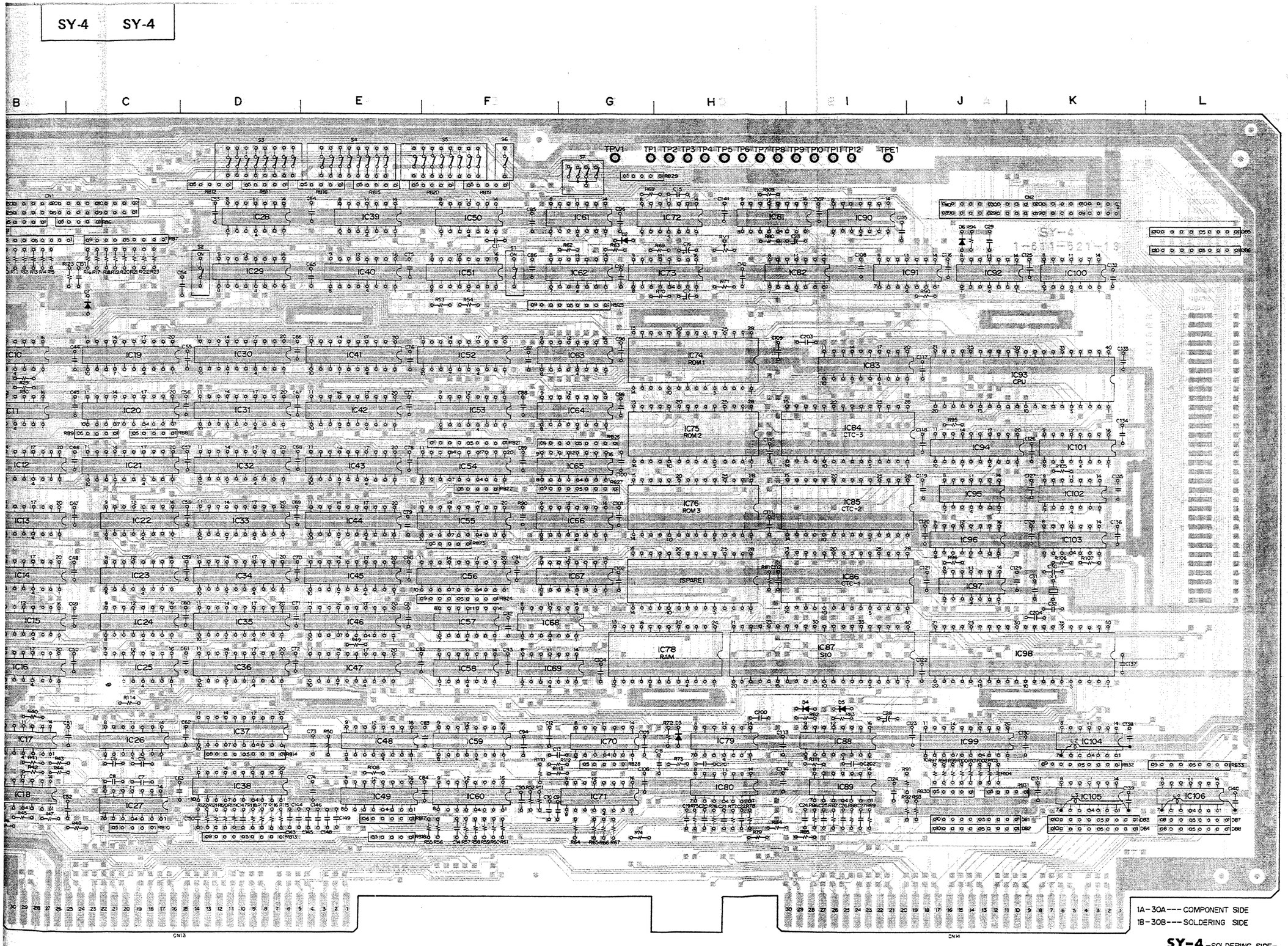


SY-4 (1/3)
1-611-521-13
BVM-40
BVM-40P
BVM-40S

SY-4 (SYSTEM CONTROL)

Ref. No.	Type	Pin No. +5V	Pin No. GND	Ref. No.	Type	Pin No. +5V	Pin No. GND
IC 1	AM26LS31PC	16	8	IC 54	SN74LS244N	20	10
IC 2	AM26LS32PC	16	8	IC 55	SN74LS244N	20	10
IC 3	TC40H240P	20	10	IC 56	SN74LS245N	20	10
IC 4	SN74LS244N	20	10	IC 57	SN74LS00N	14	7
IC 5	SN74LS244N	20	10	IC 58	SN74LS08N	14	7
IC 6	SN74LS244N	20	10	IC 59	TC4021BP	16	8
IC 7	MC14094BCP	16	8	IC 60	TC4021BP	16	8
IC 8	SN74LS32N	14	7	IC 61	M54529AP	14	7
IC 9	NJM2903D	8	4	IC 62	SN74LS37N	14	7
IC 10	AM26LS32PC	16	8	IC 63	SN74LS138N	16	8
IC 11	AM26LS31PC	16	8	IC 64	SN74LS138N	16	8
IC 12	TC40H240P	20	10	IC 65	SN74LS138N	16	8
IC 13	SN74LS244N	20	10	IC 66	SN74LS138N	16	8
IC 14	SN74LS244N	20	10	IC 67	SN74LS139N	16	8
IC 15	MC14094BCP	16	8	IC 68	SN74LS32N	14	7
IC 16	SN74LS240N	20	10	IC 69	SN74LS32N	14	7
IC 17	MC14584BCP	14	7	IC 70	SN74LS37N	14	7
IC 18	M54529AP	14	7	IC 71	TC4050BP	1	8
IC 19	TC40H240P	20	10	IC 72	TC4073BP	14	7
IC 20	SN74LS244N	20	10	IC 73	MC14538BCP	16	8
IC 21	SN74LS244N	20	10	IC 74	MBM2764-25	28	14
IC 22	TC4021BP	16	8	IC 75	MBM2764-25	28	14
IC 23	TC4021BP	16	8	IC 76	MBM2764-25	28	14
IC 24	TC4021BP	16	8	IC 77	MBM2764-25	28	14
IC 25	TC4021BP	16	8	IC 78	MSM2128-15RS	24	12
IC 26	SN74LS37N	14	7	IC 79	MC14584BCP	14	7
IC 27	M54529AP	14	7	IC 80	SN74LS37N	14	7
IC 28	M54529AP	14	7	IC 81	MC14538BCP	16	8
IC 29	TC4021BP	16	8	IC 82	TC4011BP	14	7
IC 30	TC40H273P	20	10	IC 83	SN74LS244N	20	10
IC 31	TC40H273P	20	10	IC 84	LH0082A	24	5
IC 32	TC40H273P	20	10	IC 85	LH0082A	24	5
IC 33	TC40H273P	20	10	IC 86	LH0082A	24	5
IC 34	TC40H273P	20	10	IC 87	LH0084A	9	31
IC 35	TC40H273P	20	10	IC 88	TC40H368P	16	8
IC 36	TC40H273P	20	10	IC 89	SN74LS37N	14	7
IC 37	SN74LS240N	20	10	IC 90	TC4013BP	14	7
IC 38	SN74LS240N	20	10	IC 91	MC14584BCP	14	7
IC 39	TC4081BP	14	7	IC 92	TC4024BP	14	7
IC 40	TC4021BP	16	8	IC 93	LH0080A	11	29
IC 41	TC40H273P	20	10	IC 94	SN74LS244N	20	10
IC 42	TC40H273P	20	10	IC 95	SN74LS164N	14	7
IC 43	TC40H273P	20	10	IC 96	TC40H368P	16	8
IC 44	TC40H273P	20	10	IC 97	SN74S74N	14	7
IC 45	TC40H273P	20	10	IC 98	μPD8279C-5	40	20
IC 46	TC40H273P	20	10	IC 99	TC40H244P	20	10
IC 47	TC40H273P	20	10	IC100	M54529AP	14	7
IC 48	TC4021BP	16	8	IC101	TC4020BP	16	8
IC 49	TC4021BP	16	8	IC102	SN74LS164N	14	7
IC 50	M54529AP	14	7	IC103	SN74S04N	14	7
IC 51	MC14094BCP	16	8	IC104	M54529AP	14	7
IC 52	SN74LS244N	20	10	IC105	M54529AP	14	7
IC 53	SN74LS138N	16	8	IC106	M54529AP	14	7





CN1	B - 1	IC80	H - 10
CN2	K - 1	IC81	H - 1
CN13	C - 10	IC82	I - 2
CN14	J - 10	IC83	I - 3
		IC84	I - 4
D1	B - 9	IC85	I - 6
D2	G - 2	IC86	I - 7
D3	H - 9	IC87	I - 8
D4	I - 9	IC88	I - 9
D5	I - 9	IC89	I - 10
D6	J - 2	IC90	I - 1
D7	C - 2	IC91	J - 2
		IC92	J - 2
DB1	J - 10	IC93	K - 3
DB2	J - 10	IC94	J - 4
DB3	K - 10	IC95	J - 5
DB4	K - 10	IC96	J - 6
DB5	L - 1	IC97	J - 7
DB6	L - 2	IC98	K - 8
DB7	L - 10	IC99	J - 9
DB8	L - 10	IC100	K - 2
		IC101	K - 4
IC1	A - 2	IC102	K - 5
IC2	A - 3	IC103	K - 6
IC3	A - 4	IC104	K - 9
IC4	A - 5	IC105	K - 10
IC5	A - 6	IC106	L - 10
IC6	A - 7		
IC7	A - 8	RV1	H - 2
IC8	A - 9		
IC9	A - 10	S1	F - 2
IC10	B - 3	S2	D - 2
IC11	B - 4	S3	D - 1
IC12	B - 5	S4	E - 1
IC13	B - 6	S5	F - 1
IC14	B - 7	S6	F - 1
IC15	B - 8	S7	G - 1
IC16	B - 8		
IC17	B - 9	TP1	G - 1
IC18	B - 10	TP2	H - 1
IC19	C - 3	TP3	H - 1
IC20	C - 4	TP4	H - 1
IC21	C - 5	TP5	H - 1
IC22	C - 6	TP6	H - 1
IC23	C - 7	TP7	H - 1
IC24	C - 8	TP8	H - 1
IC25	C - 8	TP9	I - 1
IC26	C - 9	TP10	I - 1
IC27	C - 10	TP11	I - 1
IC28	D - 1	TP12	I - 1
IC29	D - 2		
IC30	D - 3	TPE1	I - 1
IC31	D - 4		
IC32	D - 5	TPV1	G - 1
IC33	D - 6		
IC34	D - 7	X1	K - 7
IC35	D - 8		
IC36	D - 8		
IC37	D - 9		
IC38	D - 10		
IC39	E - 1		
IC40	E - 2		
IC41	E - 3		
IC42	E - 4		
IC43	E - 5		
IC44	E - 6		
IC45	E - 7		
IC46	E - 8		
IC47	E - 8		
IC48	E - 9		
IC49	E - 10		
IC50	F - 1		
IC51	F - 2		
IC52	F - 3		
IC53	F - 4		
IC54	F - 5		
IC55	F - 6		
IC56	F - 7		
IC57	F - 8		
IC58	F - 8		
IC59	F - 9		
IC60	F - 10		
IC61	G - 1		
IC62	G - 2		
IC63	G - 3		
IC64	G - 4		
IC65	G - 5		
IC66	G - 6		
IC67	G - 7		
IC68	F - 8		
IC69	F - 8		
IC70	G - 9		
IC71	G - 10		
IC72	H - 1		
IC73	H - 2		
IC74	H - 3		
IC75	H - 4		
IC76	H - 6		
IC78	H - 8		
IC79	H - 9		

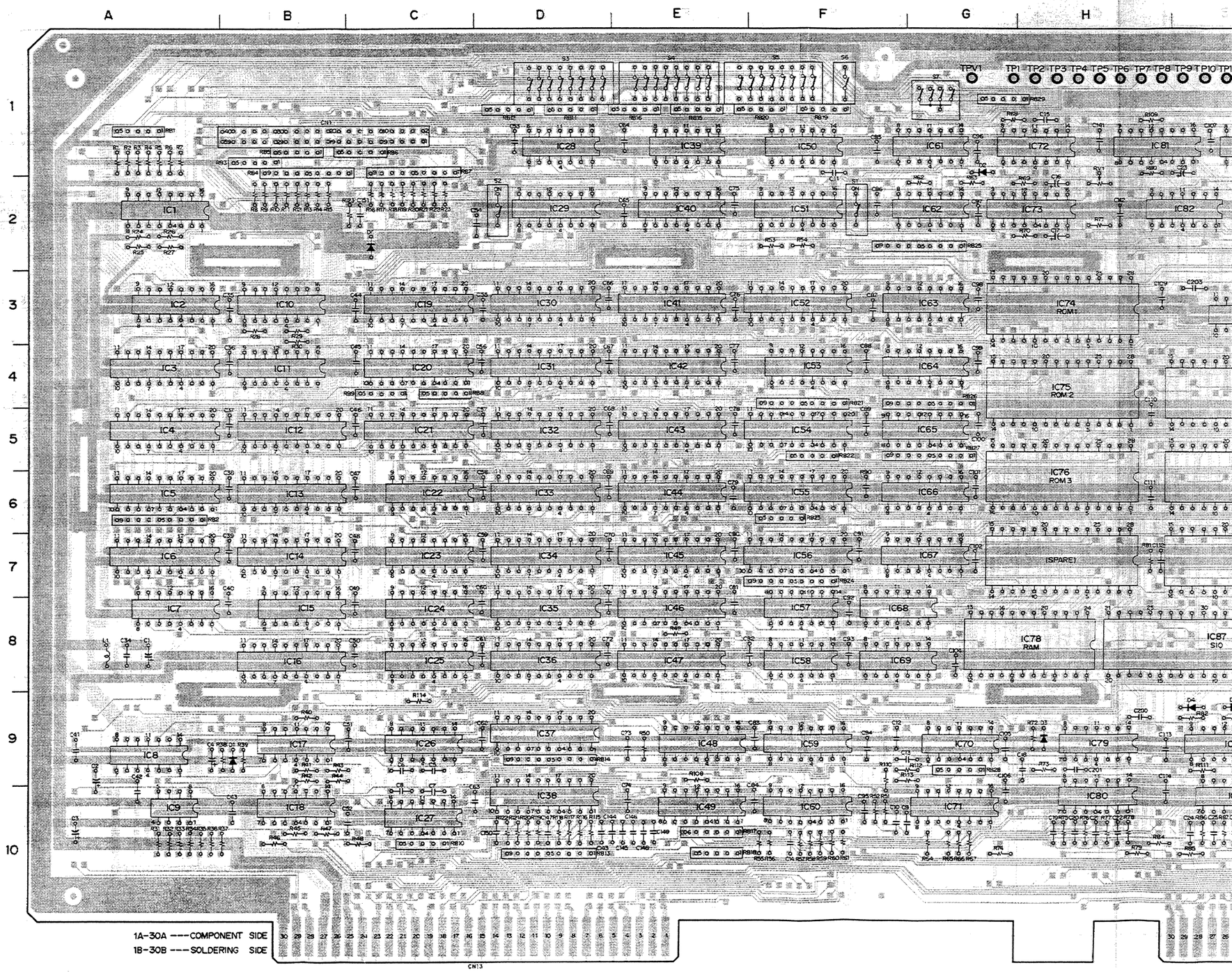
1A-30A --- COMPONENT SIDE
1B-30B --- SOLDERING SIDE

SY-4 -SOLDERING SIDE-

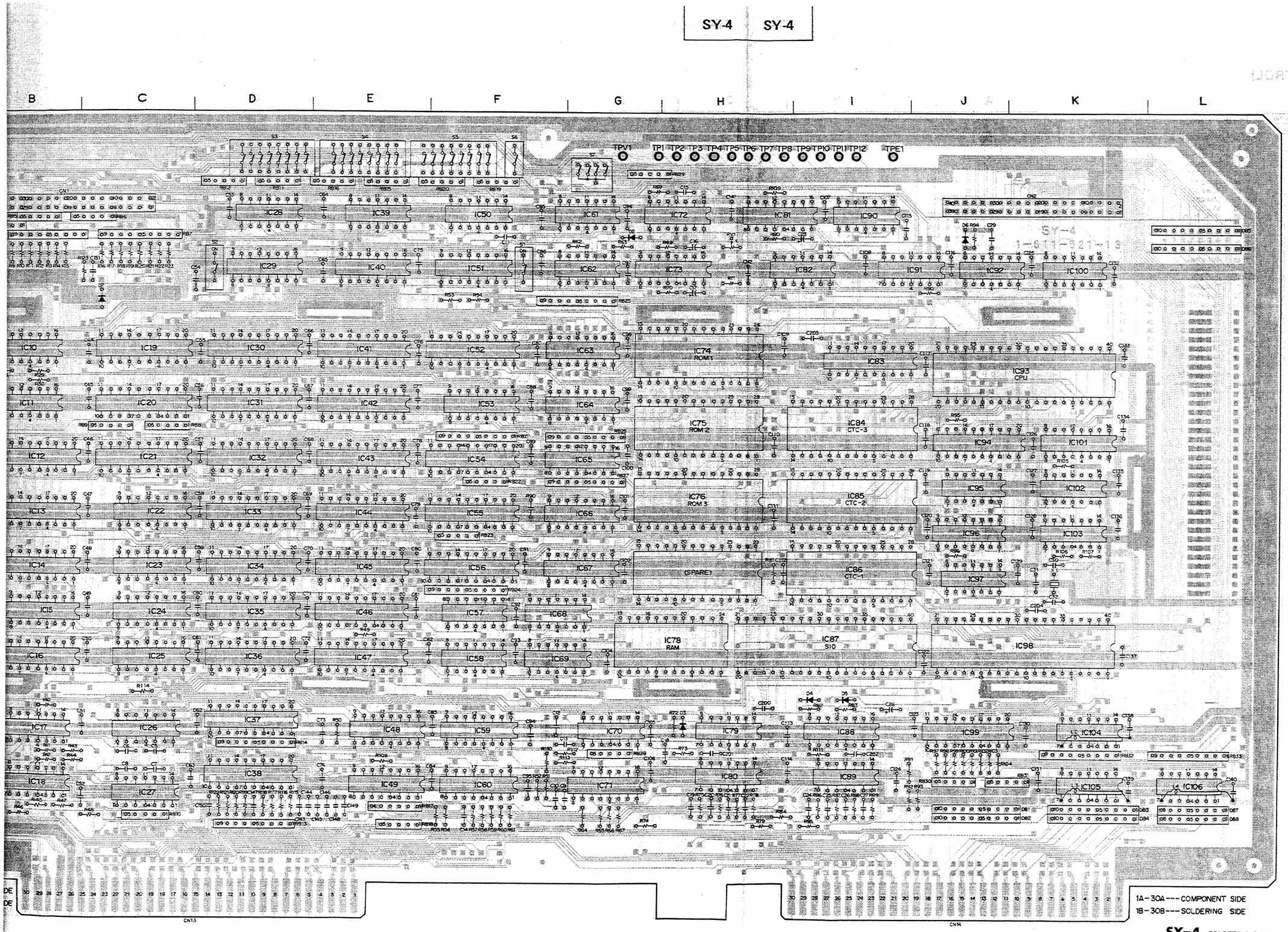
1-611-521-13
8VW-40
8VW-40P

SY-4 (SYSTEM CONTROL)

Ref. No.	Type	Pin No. +5V	Pin No. GND	Ref. No.	Type	Pin No. +5V	Pin No. GND
IC 1	AM26LS31PC	16	8	IC 54	SN74LS244N	20	10
IC 2	AM26LS32PC	16	8	IC 55	SN74LS244N	20	10
IC 3	TC40H240P	20	10	IC 56	SN74LS245N	20	10
IC 4	SN74LS244N	20	10	IC 57	SN74LS00N	14	7
IC 5	SN74LS244N	20	10	IC 58	SN74LS08N	14	7
IC 6	SN74LS244N	20	10	IC 59	TC4021BP	16	8
IC 7	MC14094BCP	16	8	IC 60	TC4021BP	16	8
IC 8	SN74LS32N	14	7	IC 61	M54529AP	14	7
IC 9	NJM2903D	8	4	IC 62	SN74LS37N	14	7
IC 10	AM26LS32PC	16	8	IC 63	SN74LS138N	16	8
IC 11	AM26LS31PC	16	8	IC 64	SN74LS138N	16	8
IC 12	TC40H240P	20	10	IC 65	SN74LS138N	16	8
IC 13	SN74LS244N	20	10	IC 66	SN74LS138N	16	8
IC 14	SN74LS244N	20	10	IC 67	SN74LS139N	16	8
IC 15	MC14094BCP	16	8	IC 68	SN74LS32N	14	7
IC 16	SN74LS240N	20	10	IC 69	SN74LS32N	14	7
IC 17	MC14584BCP	14	7	IC 70	SN74LS37N	14	7
IC 18	M54529AP	14	7	IC 71	TC4050BP	1	8
IC 19	TC40H240P	20	10	IC 72	TC4073BP	14	7
IC 20	SN74LS244N	20	10	IC 73	MC14538BCP	16	8
IC 21	SN74LS244N	20	10	IC 74	MBM2764-25	28	14
IC 22	TC4021BP	16	8	IC 75	MBM2764-25	28	14
IC 23	TC4021BP	16	8	IC 76	MBM2764-25	28	14
IC 24	TC4021BP	16	8	IC 77	MBM2764-25	28	14
IC 25	TC4021BP	16	8	IC 78	MSM2128-15RS	24	12
IC 26	SN74LS37N	14	7	IC 79	MC14584BCP	14	7
IC 27	M54529AP	14	7	IC 80	SN74LS37N	14	7
IC 28	M54529AP	14	7	IC 81	MC14538BCP	16	8
IC 29	TC4021BP	16	8	IC 82	TC4011BP	14	7
IC 30	TC40H273P	20	10	IC 83	SN74LS244N	20	10
IC 31	TC40H273P	20	10	IC 84	LH0082A	24	5
IC 32	TC40H273P	20	10	IC 85	LH0082A	24	5
IC 33	TC40H273P	20	10	IC 86	LH0082A	24	5
IC 34	TC40H273P	20	10	IC 87	LH0084A	9	31
IC 35	TC40H273P	20	10	IC 88	TC40H368P	16	8
IC 36	TC40H273P	20	10	IC 89	SN74LS37N	14	7
IC 37	SN74LS240N	20	10	IC 90	TC4013BP	14	7
IC 38	SN74LS240N	20	10	IC 91	MC14584BCP	14	7
IC 39	TC4081BP	14	7	IC 92	TC4024BP	14	7
IC 40	TC4021BP	16	8	IC 93	LH0080A	11	29
IC 41	TC40H273P	20	10	IC 94	SN74LS244N	20	10
IC 42	TC40H273P	20	10	IC 95	SN74LS164N	14	7
IC 43	TC40H273P	20	10	IC 96	TC40H368P	16	8
IC 44	TC40H273P	20	10	IC 97	SN74S74N	14	7
IC 45	TC40H273P	20	10	IC 98	μPD8278C-5	40	29
IC 46	TC40H273P	20	10	IC 99	TC40H244P	20	10
IC 47	TC40H273P	20	10	IC100	M54529AP	14	7
IC 48	TC4021BP	16	8	IC101	TC4020BP	16	8
IC 49	TC4021BP	16	8	IC102	SN74LS164N	14	7
IC 50	M54529AP	14	7	IC103	SN74S04N	14	7
IC 51	MC14094BCP	16	8	IC104	M54529AP	14	7
IC 52	SN74LS244N	20	10	IC105	M54529AP	14	7
IC 53	SN74LS138N	16	8	IC106	M54529AP	14	7

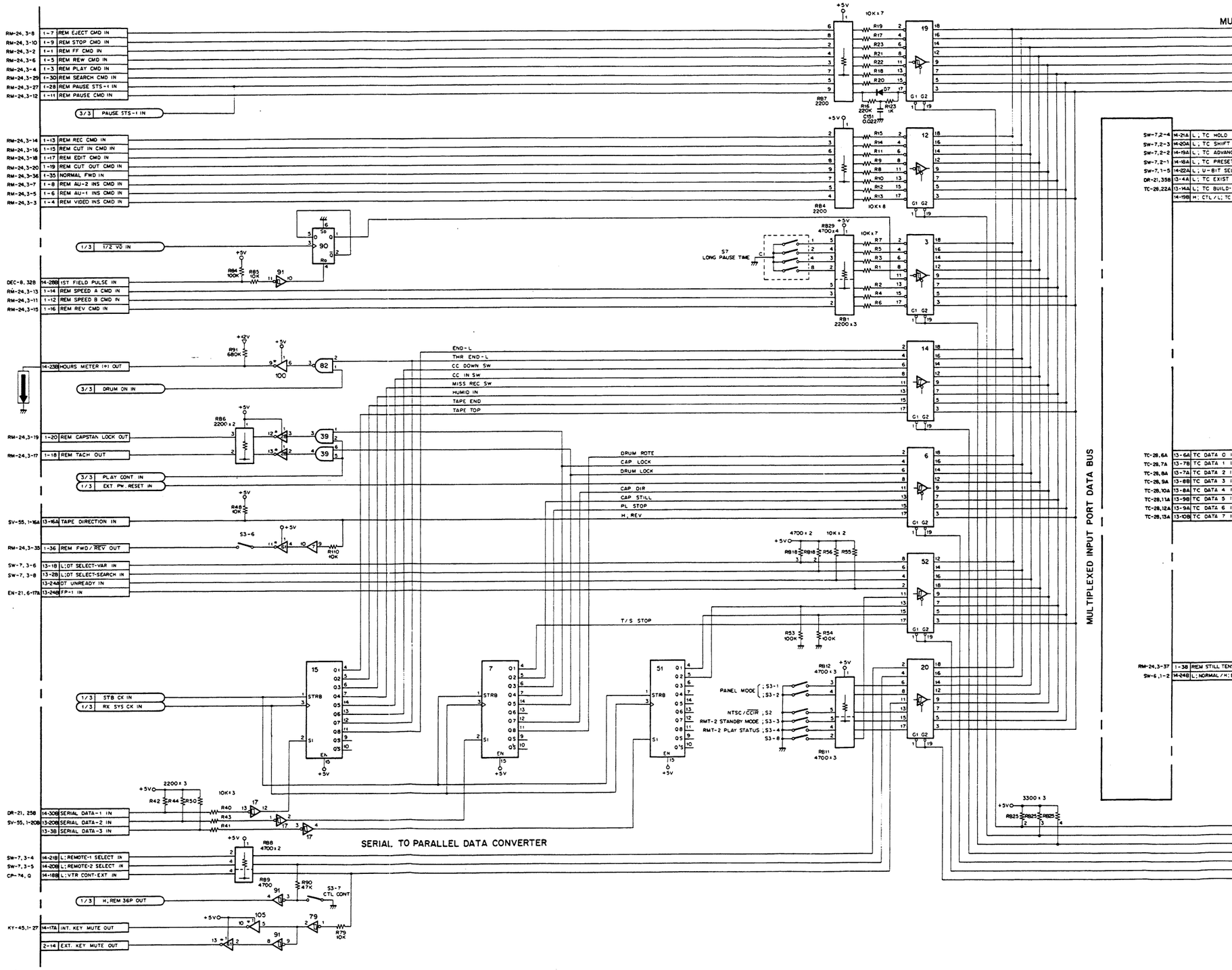


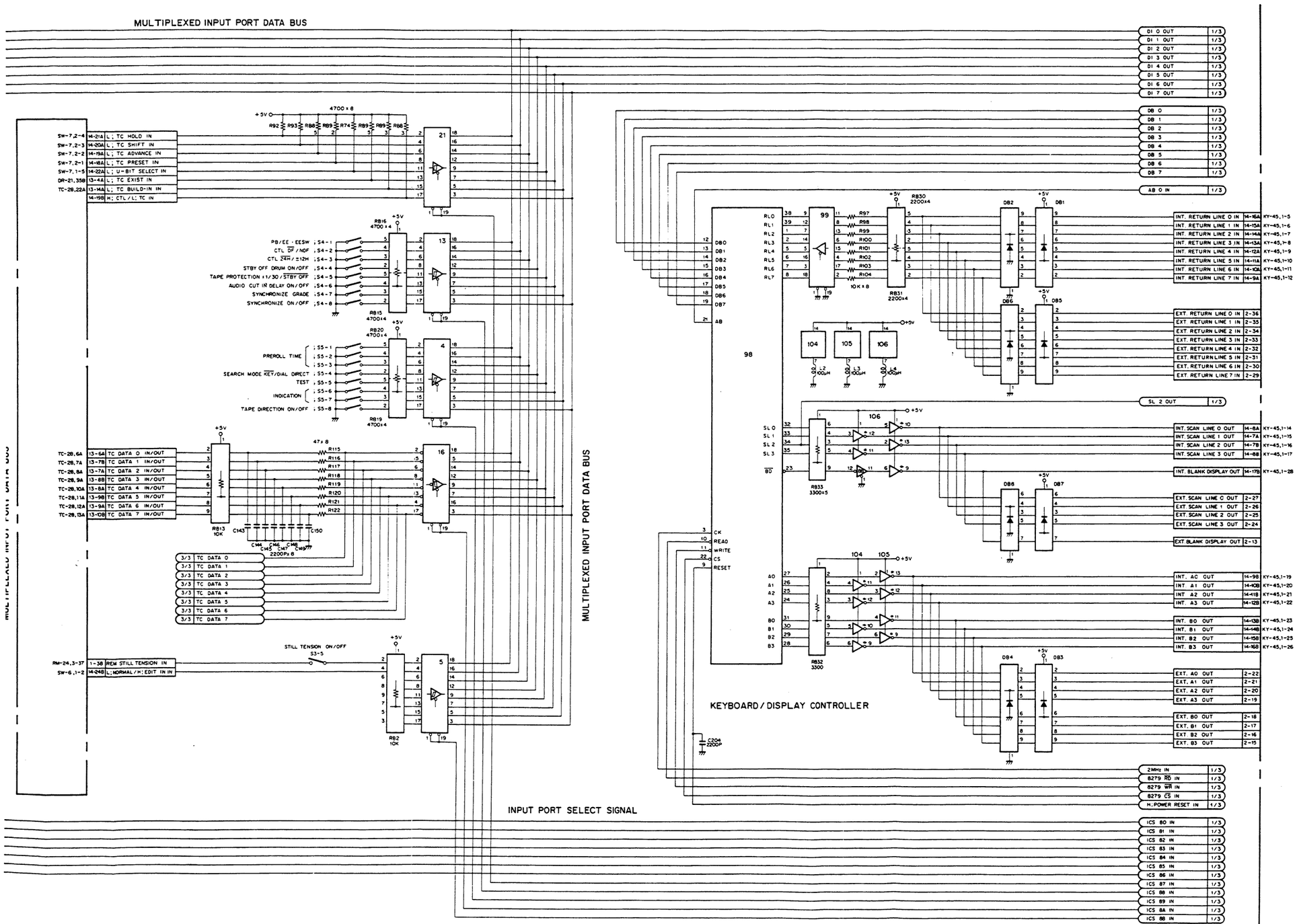
SY-4 SY-4



CN1	B - 1	IC80	H - 10
CN2	K - 1	IC81	H - 1
CN13	C - 10	IC82	I - 2
CN14	J - 10	IC83	I - 3
		IC84	I - 4
D1	B - 9	IC85	I - 6
D2	G - 2	IC86	I - 7
D3	H - 9	IC87	I - 8
D4	I - 9	IC88	I - 9
D5	I - 9	IC89	I - 10
D6	J - 2	IC90	I - 1
D7	C - 2	IC91	J - 2
		IC92	J - 2
DB1	J - 10	IC93	K - 3
DB2	J - 10	IC94	J - 4
DB3	K - 10	IC95	J - 5
DB4	K - 10	IC96	J - 6
DB5	L - 1	IC97	J - 7
DB6	L - 2	IC98	K - 8
DB7	L - 10	IC99	J - 9
DB8	L - 10	IC100	K - 2
		IC101	K - 4
IC1	A - 2	IC102	K - 5
IC2	A - 3	IC103	K - 6
IC3	A - 4	IC104	K - 9
IC4	A - 5	IC105	K - 10
IC5	A - 6	IC106	L - 10
IC6	A - 7		
IC7	A - 8	RV1	H - 2
IC8	A - 9		
IC9	A - 10	S1	F - 2
IC10	B - 3	S2	D - 2
IC11	B - 4	S3	D - 1
IC12	B - 5	S4	E - 1
IC13	B - 6	S5	F - 1
IC14	B - 7	S6	F - 1
IC15	B - 8	S7	G - 1
IC16	B - 8		
IC17	B - 9	TP1	G - 1
IC18	B - 10	TP2	H - 1
IC19	C - 3	TP3	H - 1
IC20	C - 4	TP4	H - 1
IC21	C - 5	TP5	H - 1
IC22	C - 6	TP6	H - 1
IC23	C - 7	TP7	H - 1
IC24	C - 8	TP8	H - 1
IC25	C - 8	TP9	I - 1
IC26	C - 9	TP10	I - 1
IC27	C - 10	TP11	I - 1
IC28	D - 1	TP12	I - 1
IC29	D - 2		
IC30	D - 3	TPE1	I - 1
IC31	D - 4		
IC32	D - 5	TPV1	G - 1
IC33	D - 6		
IC34	D - 7	X1	K - 7
IC35	D - 8		
IC36	D - 8		
IC37	D - 9		
IC38	D - 10		
IC39	E - 1		
IC40	E - 2		
IC41	E - 3		
IC42	E - 4		
IC43	E - 5		
IC44	E - 6		
IC45	E - 7		
IC46	E - 8		
IC47	E - 8		
IC48	E - 9		
IC49	E - 10		
IC50	F - 1		
IC51	F - 2		
IC52	F - 3		
IC53	F - 4		
IC54	F - 5		
IC55	F - 6		
IC56	F - 7		
IC57	F - 8		
IC58	F - 8		
IC59	F - 9		
IC60	F - 10		
IC61	G - 1		
IC62	G - 2		
IC63	G - 3		
IC64	G - 4		
IC65	G - 5		
IC66	G - 6		
IC67	G - 7		
IC68	F - 8		
IC69	F - 8		
IC70	G - 9		
IC71	G - 10		
IC72	H - 1		
IC73	H - 2		
IC74	H - 3		
IC75	H - 4		
IC76	H - 6		
IC78	H - 8		
IC79	H - 9		

SY-4 (2/3) (SYSTEM CONTROL)

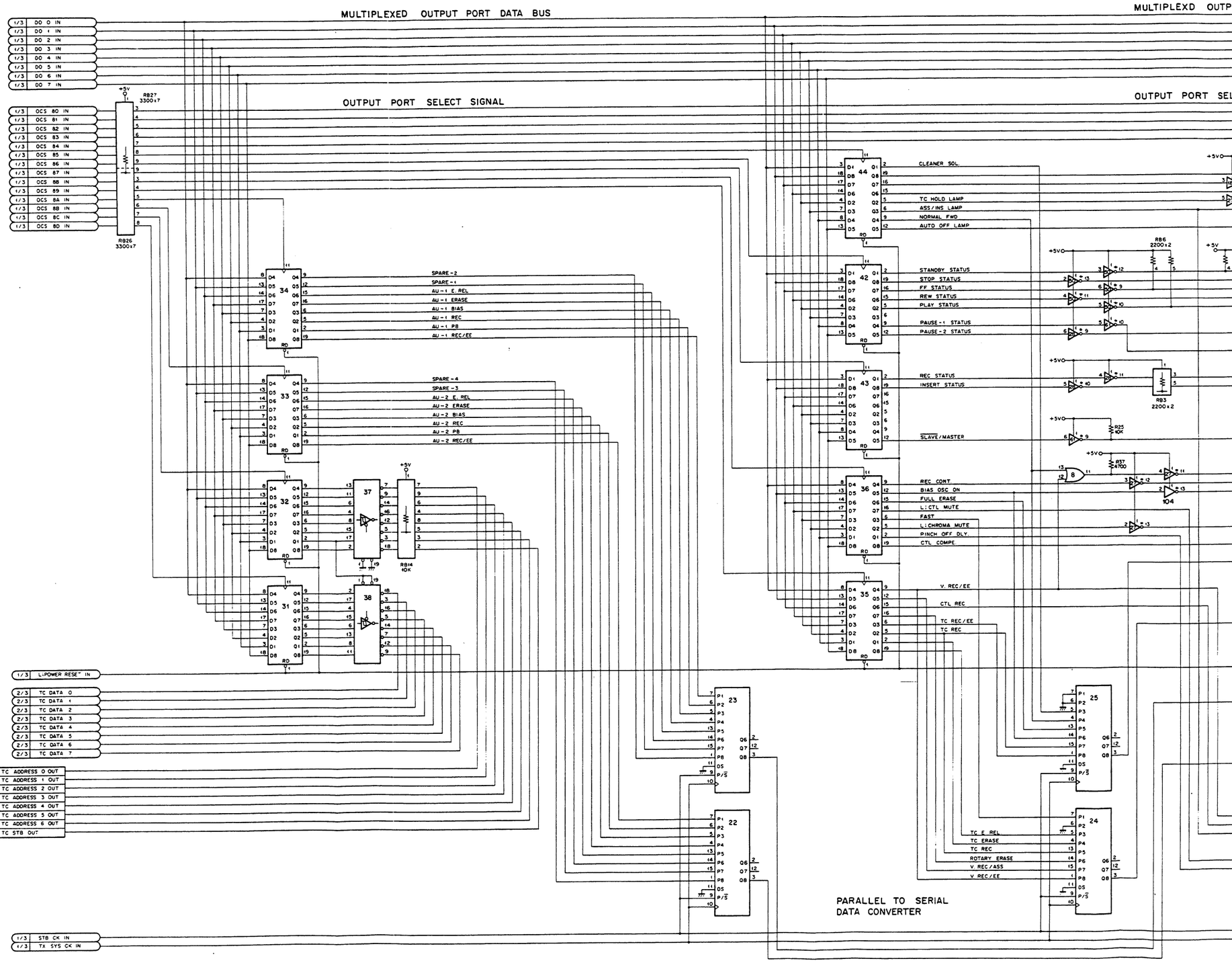


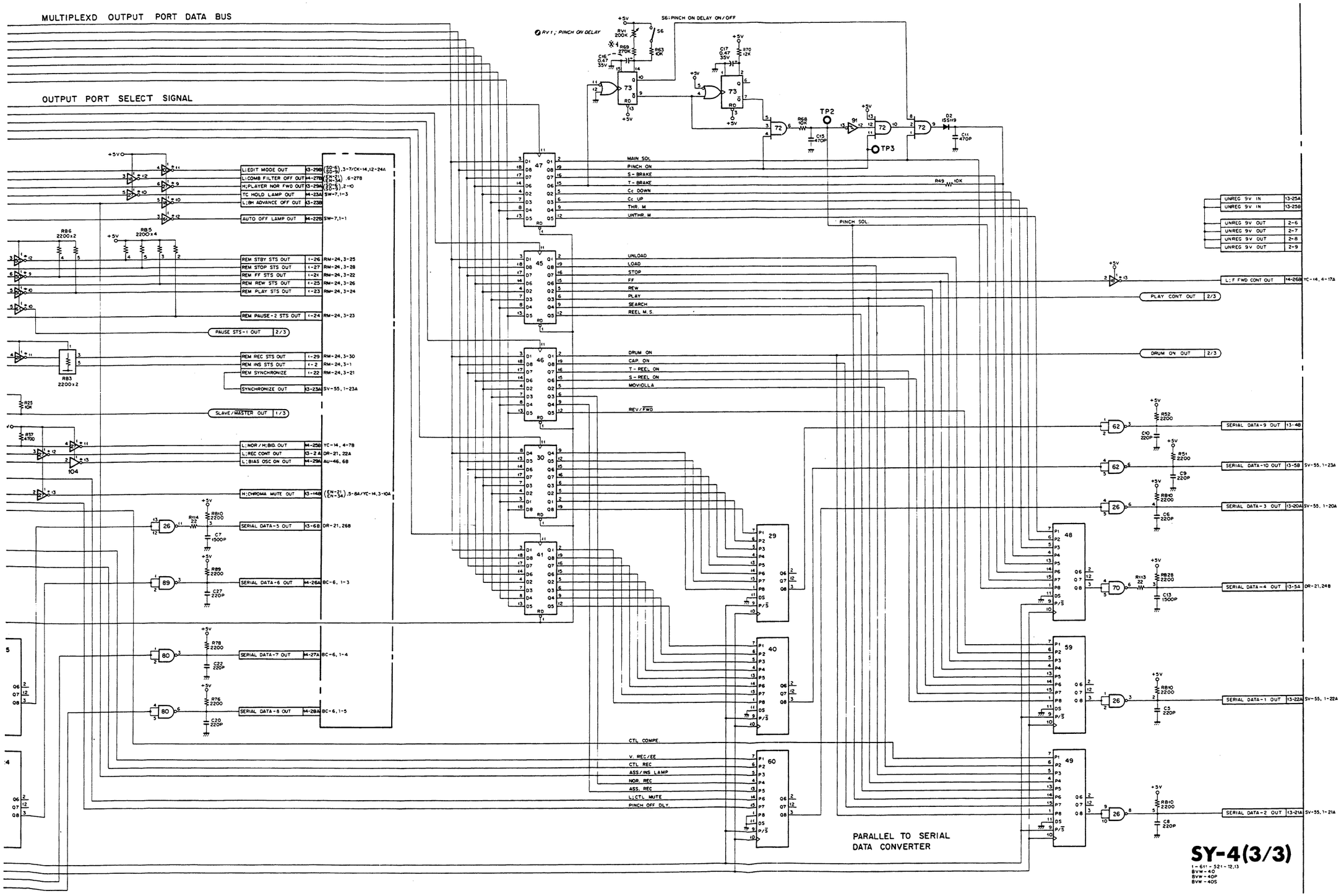

MULTIPLEXED INPUT PORT DATA BUS
MULTIPLEXED INPUT PORT DATA BUS
INPUT PORT SELECT SIGNAL
KEYBOARD / DISPLAY CONTROLLER
SW-7,2-4 14-21A L ; TC HOLD IN
SW-7,2-3 14-20A L ; TC SHIFT IN
SW-7,2-2 14-19A L ; TC ADVANCE IN
SW-7,2-1 14-18A L ; TC PRESET IN
SW-7,1-5 14-22A L ; U-BIT SELECT IN
DR-21,35B 13-4A L ; TC EXIST IN
TC-28,22A 13-14A L ; TC BUILD-IN IN
14-19B H ; CTL / L ; TC IN
PB/EE · EESW ; S4-1
CTL DF / NDF ; S4-2
CTL 24H / ±12H ; S4-3
STBY OFF DRUM ON/OFF ; S4-4
TAPE PROTECTION ±1/30 / STBY OFF ; S4-5
AUDIO CUT IN DELAY ON / OFF ; S4-6
SYNCHRONIZE GRADE ; S4-7
SYNCHRONIZE ON / OFF ; S4-8
PREROLL TIME ; S5-1 ; S5-2 ; S5-3
SEARCH MODE KEY / DIAL DIRECT ; S5-4
TEST ; S5-5
INDICATION ; S5-6 ; S5-7
TAPE DIRECTION ON/OFF ; S5-8
TC-28,6A 13-6A TC DATA 0 IN/OUT
TC-28,7A 13-7B TC DATA 1 IN/OUT
TC-28,8A 13-7A TC DATA 2 IN/OUT
TC-28,9A 13-8B TC DATA 3 IN/OUT
TC-28,10A 13-8A TC DATA 4 IN/OUT
TC-28,11A 13-9B TC DATA 5 IN/OUT
TC-28,12A 13-9A TC DATA 6 IN/OUT
TC-28,13A 13-10B TC DATA 7 IN/OUT
3/3 TC DATA 0
3/3 TC DATA 1
3/3 TC DATA 2
3/3 TC DATA 3
3/3 TC DATA 4
3/3 TC DATA 5
3/3 TC DATA 6
3/3 TC DATA 7
RM-24,3-37 1-3B REM STILL TENSION IN
SW-6,1-2 14-24B L ; NORMAL / H ; EDIT IN IN
STILL TENSION ON/OFF S3-5
DI 0 OUT 1/3
DI 1 OUT 1/3
DI 2 OUT 1/3
DI 3 OUT 1/3
DI 4 OUT 1/3
DI 5 OUT 1/3
DI 6 OUT 1/3
DI 7 OUT 1/3
DB 0 1/3
DB 1 1/3
DB 2 1/3
DB 3 1/3
DB 4 1/3
DB 5 1/3
DB 6 1/3
DB 7 1/3
AB 0 IN 1/3
SL 2 OUT 1/3
INT. RETURN LINE 0 IN 14-16A KY-45,1-5
INT. RETURN LINE 1 IN 14-15A KY-45,1-6
INT. RETURN LINE 2 IN 14-14A KY-45,1-7
INT. RETURN LINE 3 IN 14-13A KY-45,1-8
INT. RETURN LINE 4 IN 14-12A KY-45,1-9
INT. RETURN LINE 5 IN 14-11A KY-45,1-10
INT. RETURN LINE 6 IN 14-10A KY-45,1-11
INT. RETURN LINE 7 IN 14-9A KY-45,1-12
EXT. RETURN LINE 0 IN 2-36
EXT. RETURN LINE 1 IN 2-35
EXT. RETURN LINE 2 IN 2-34
EXT. RETURN LINE 3 IN 2-33
EXT. RETURN LINE 4 IN 2-32
EXT. RETURN LINE 5 IN 2-31
EXT. RETURN LINE 6 IN 2-30
EXT. RETURN LINE 7 IN 2-29
INT. SCAN LINE 0 OUT 14-6A KY-45,1-14
INT. SCAN LINE 1 OUT 14-7A KY-45,1-15
INT. SCAN LINE 2 OUT 14-7B KY-45,1-16
INT. SCAN LINE 3 OUT 14-8B KY-45,1-17
INT. BLANK DISPLAY OUT 14-17B KY-45,1-28
EXT. SCAN LINE 0 OUT 2-27
EXT. SCAN LINE 1 OUT 2-26
EXT. SCAN LINE 2 OUT 2-25
EXT. SCAN LINE 3 OUT 2-24
EXT. BLANK DISPLAY OUT 2-13
INT. A0 OUT 14-9B KY-45,1-19
INT. A1 OUT 14-10B KY-45,1-20
INT. A2 OUT 14-11B KY-45,1-21
INT. A3 OUT 14-12B KY-45,1-22
INT. B0 OUT 14-13B KY-45,1-23
INT. B1 OUT 14-14B KY-45,1-24
INT. B2 OUT 14-15B KY-45,1-25
INT. B3 OUT 14-16B KY-45,1-26
EXT. A0 OUT 2-22
EXT. A1 OUT 2-21
EXT. A2 OUT 2-20
EXT. A3 OUT 2-19
EXT. B0 OUT 2-18
EXT. B1 OUT 2-17
EXT. B2 OUT 2-16
EXT. B3 OUT 2-15
2MHz IN 1/3
8279 RD IN 1/3
8279 WR IN 1/3
8279 CS IN 1/3
H. POWER RESET IN 1/3
ICS B0 IN 1/3
ICS B1 IN 1/3
ICS B2 IN 1/3
ICS B3 IN 1/3
ICS B4 IN 1/3
ICS B5 IN 1/3
ICS B6 IN 1/3
ICS B7 IN 1/3
ICS B8 IN 1/3
ICS B9 IN 1/3
ICS BA IN 1/3
ICS BB IN 1/3
CK
READ
WRITE
CS
RESET
SL0
SL1
SL2
SL3
B0
A0
A1
A2
A3
B1
B2
B3
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
AB
RL0
RL1
RL2
RL3
RL4
RL5
RL6
RL7
4700 × 8
10K × 8
2200 × 4
3300 × 5
2200P × 8
SY-4(2/3)
1-611-521-13
8VW-40
8VW-40P

SY-4 (3/3) (SYSTEM CONTROL)

NOTE:

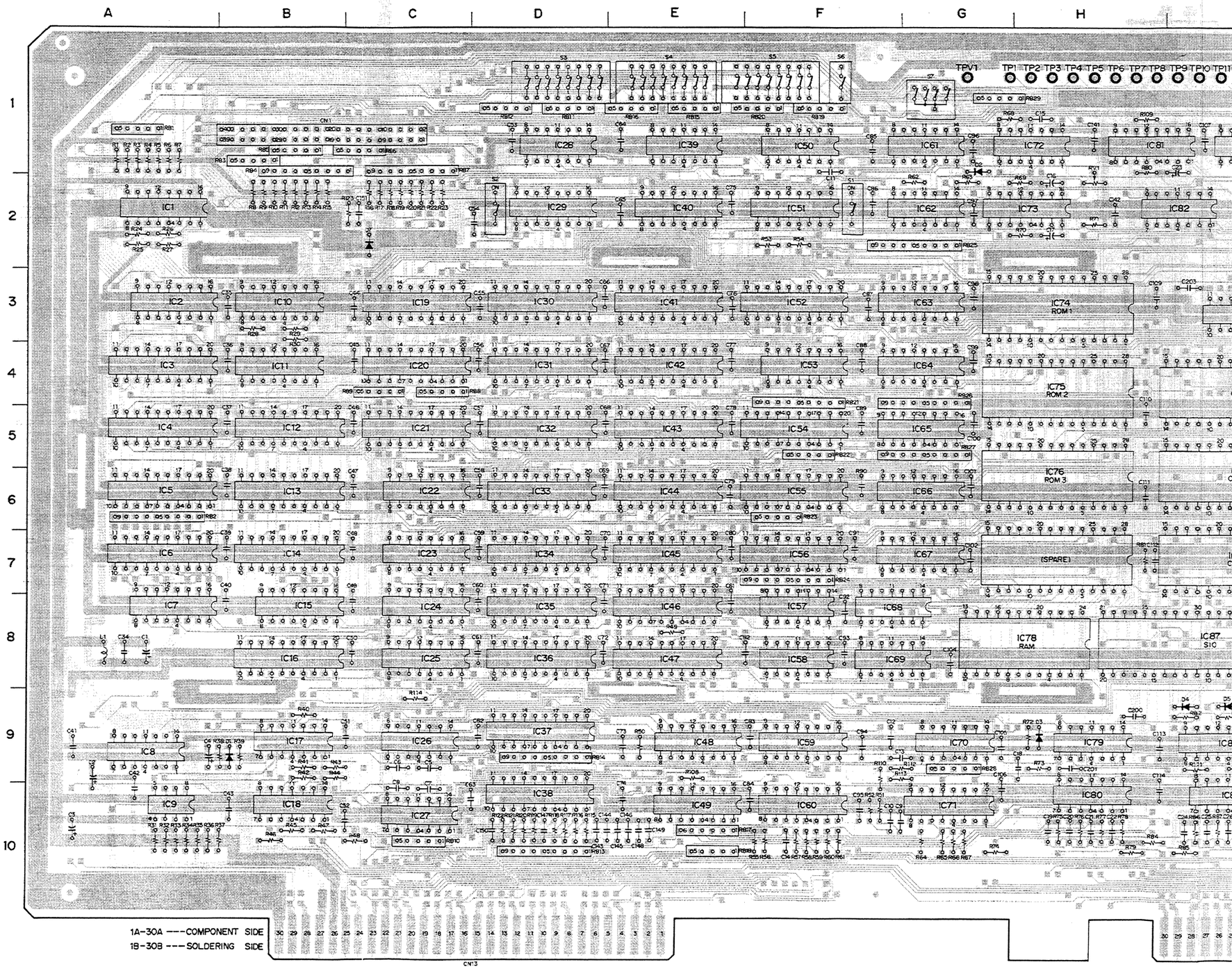
MARK	CHANGE INFORMATION	SERIAL NO.
※1	R69 300K → 270K	UC: 11031 ~ J: 10476 ~ P: 10711 ~ S: 10011 ~

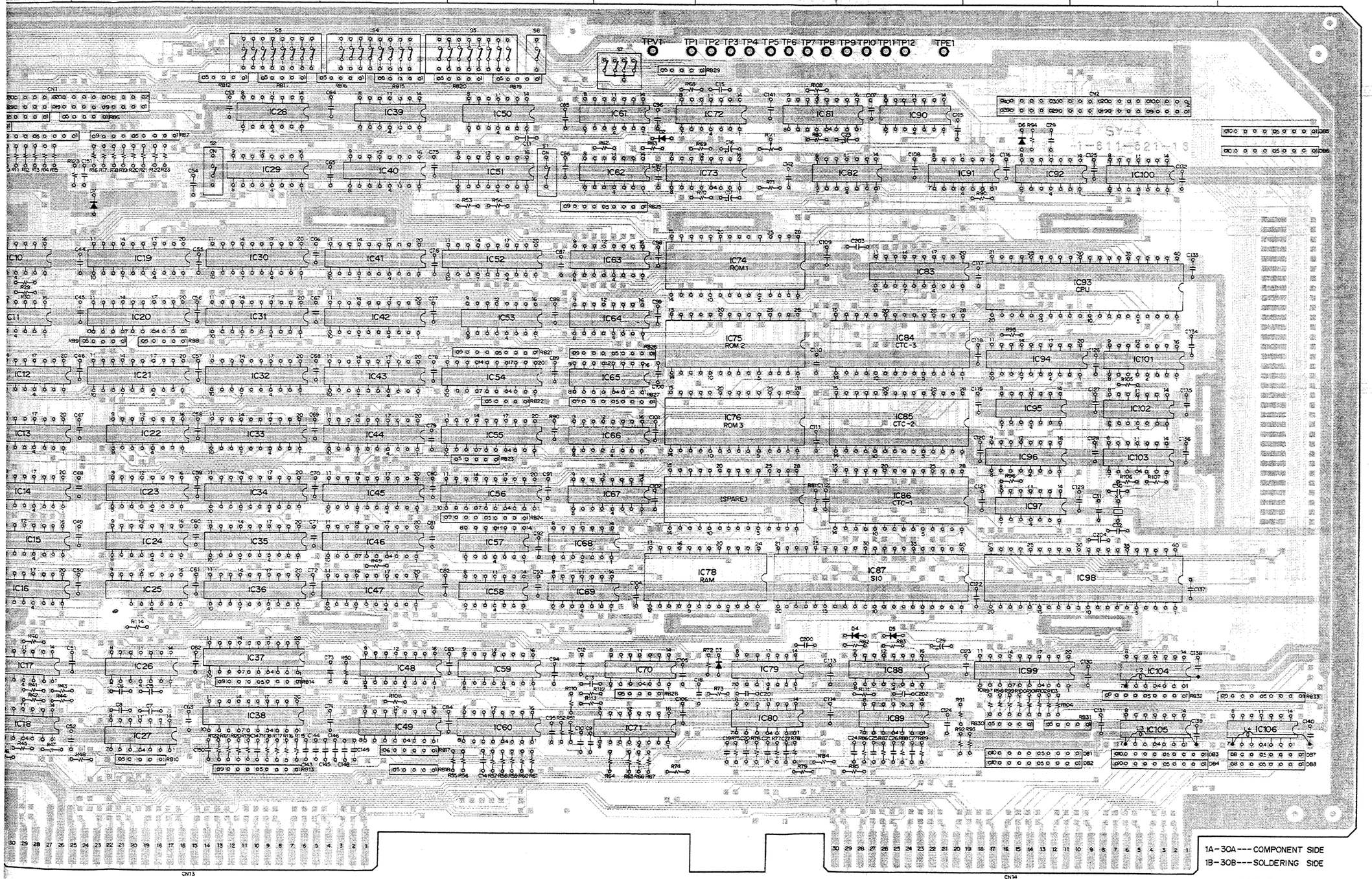



MULTIPLEXD OUTPUT PORT DATA BUS
OUTPUT PORT SELECT SIGNAL
S6:PINCH ON DELAY ON/OFF
RV1 ; PINCH ON DELAY
L;EDIT MODE OUT
L;COMB FILTER OFF OUT
H;PLAYER NOR FWD OUT
TC HOLD LAMP OUT
L;8H ADVANCE OFF OUT
AUTO OFF LAMP OUT
REM STBY STS OUT
REM STOP STS OUT
REM FF STS OUT
REM REW STS OUT
REM PLAY STS OUT
REM PAUSE-2 STS OUT
PAUSE STS-1 OUT
REM REC STS OUT
REM INS STS OUT
REM SYNCHRONIZE
SYNCHRONIZE OUT
SLAVE/MASTER OUT
L;NOR/H;BID. OUT
L;REC CONT OUT
L;BIAS OSC ON OUT
H;CHROMA MUTE OUT
SERIAL DATA-5 OUT
SERIAL DATA-6 OUT
SERIAL DATA-7 OUT
SERIAL DATA-8 OUT
MAIN SOL
PINCH ON
S-BRAKE
T-BRAKE
Cc DOWN
Cc UP
THR. M
UNTHR. M
PINCH SOL.
UNLOAD
LOAD
STOP
FF
REW
PLAY
SEARCH
REEL M.S.
DRUM ON
CAP. ON
T-REEL ON
S-REEL ON
MOVIOLLA
REV/FWD
CTL COMPE.
V. REC/EE
CTL REC
ASS/INS LAMP
NOR. REC
ASS. REC
L;CTL MUTE
PINCH OFF DLY.
UNREG 9V IN
UNREG 9V OUT
L;F FWD CONT OUT
PLAY CONT OUT
DRUM ON OUT
SERIAL DATA-9 OUT
SERIAL DATA-10 OUT
SERIAL DATA-3 OUT
SERIAL DATA-4 OUT
SERIAL DATA-1 OUT
SERIAL DATA-2 OUT
PARALLEL TO SERIAL DATA CONVERTER
SY-4(3/3)
1-611-521-12,13
BVW-40
BVW-40P
BVW-40S

SY-4 (SYSTEM CONTROL)

Ref. No.	Type	Pin No. +5V	Pin No. GND	Ref. No.	Type	Pin No. +5V	Pin No. GND
IC 1	AM26LS31PC	16	8	IC 54	SN74LS244N	20	10
IC 2	AM26LS32PC	16	8	IC 55	SN74LS244N	20	10
IC 3	TC40H240P	20	10	IC 56	SN74LS245N	20	10
IC 4	SN74LS244N	20	10	IC 57	SN74LS00N	14	7
IC 5	SN74LS244N	20	10	IC 58	SN74LS08N	14	7
IC 6	SN74LS244N	20	10	IC 59	TC4021BP	16	8
IC 7	MC14094BCP	16	8	IC 60	TC4021BP	16	8
IC 8	SN74LS32N	14	7	IC 61	M54529AP	14	7
IC 9	NJM2903D	8	4	IC 62	SN74LS37N	14	7
IC 10	AM26LS32PC	16	8	IC 63	SN74LS138N	16	8
IC 11	AM26LS31PC	16	8	IC 64	SN74LS138N	16	8
IC 12	TC40H240P	20	10	IC 65	SN74LS138N	16	8
IC 13	SN74LS244N	20	10	IC 66	SN74LS138N	16	8
IC 14	SN74LS244N	20	10	IC 67	SN74LS138N	16	8
IC 15	MC14094BCP	16	8	IC 68	SN74LS32N	14	7
IC 16	SN74LS240N	20	10	IC 69	SN74LS32N	14	7
IC 17	MC14584BCP	14	7	IC 70	SN74LS37N	14	7
IC 18	M54529AP	14	7	IC 71	TC4050BP	1	8
IC 19	TC40H240P	20	10	IC 72	TC4073BP	14	7
IC 20	SN74LS244N	20	10	IC 73	MC14538BCP	16	8
IC 21	SN74LS244N	20	10	IC 74	MBM2764-25	28	14
IC 22	TC4021BP	16	8	IC 75	MBM2764-25	28	14
IC 23	TC4021BP	16	8	IC 76	MBM2764-25	28	14
IC 24	TC4021BP	16	8	IC 77	MBM2764-25	28	14
IC 25	TC4021BP	16	8	IC 78	MSM2128-15RS	24	12
IC 26	SN74LS37N	14	7	IC 79	MC14584BCP	14	7
IC 27	M54529AP	14	7	IC 80	SN74LS37N	14	7
IC 28	M54529AP	14	7	IC 81	MC14538BCP	16	8
IC 29	TC4021BP	16	8	IC 82	TC4011BP	14	7
IC 30	TC40H273P	20	10	IC 83	SN74LS244N	20	10
IC 31	TC40H273P	20	10	IC 84	LH0082A	24	5
IC 32	TC40H273P	20	10	IC 85	LH0082A	24	5
IC 33	TC40H273P	20	10	IC 86	LH0082A	24	5
IC 34	TC40H273P	20	10	IC 87	LH0064A	9	31
IC 35	TC40H273P	20	10	IC 88	TC40H368P	16	8
IC 36	TC40H273P	20	10	IC 89	SN74LS37N	14	7
IC 37	SN74LS240N	20	10	IC 90	TC4013BP	14	7
IC 38	SN74LS240N	20	10	IC 91	MC14584BCP	14	7
IC 39	TC4081BP	14	7	IC 92	TC4024BP	14	7
IC 40	TC4021BP	16	8	IC 93	LH0080A	11	29
IC 41	TC40H273P	20	10	IC 94	SN74LS244N	20	10
IC 42	TC40H273P	20	10	IC 95	SN74LS164N	14	7
IC 43	TC40H273P	20	10	IC 96	TC40H368P	16	8
IC 44	TC40H273P	20	10	IC 97	SN74S74N	14	7
IC 45	TC40H273P	20	10	IC 98	μPD8279C-5	40	20
IC 46	TC40H273P	20	10	IC 99	TC40H244P	20	10
IC 47	TC40H273P	20	10	IC100	M54529AP	14	7
IC 48	TC4021BP	16	8	IC101	TC4020BP	16	8
IC 49	TC4021BP	16	8	IC102	SN74LS164N	14	7
IC 50	M54529AP	14	7	IC103	SN74S241N	14	7
IC 51	MC14094BCP	16	8	IC104	M54529AP	14	7
IC 52	SN74LS244N	20	10	IC105	M54529AP	14	7
IC 53	SN74LS138N	16	8	IC106	M54529AP	14	7

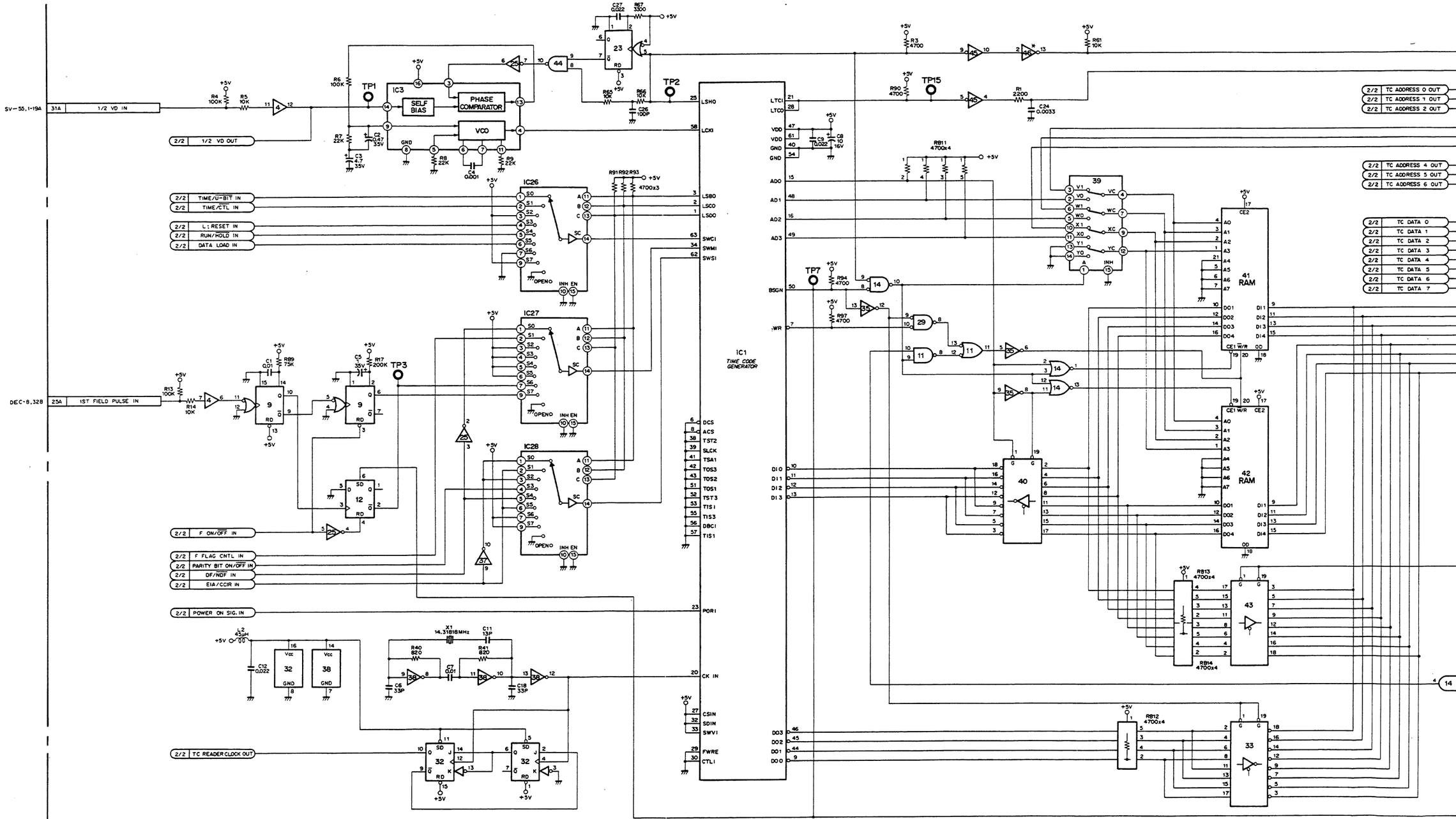


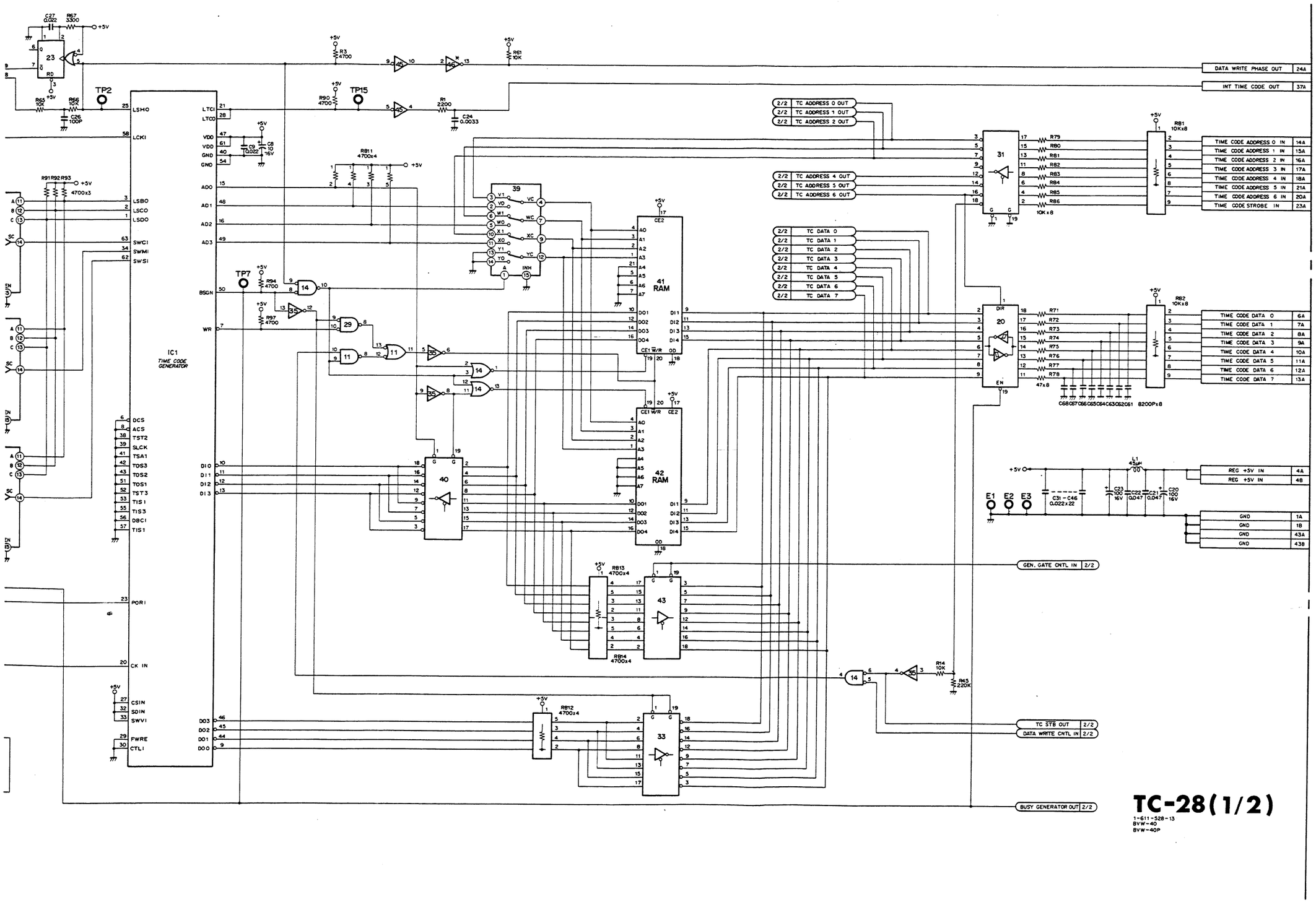


CN1	B - 1	IC80	H - 10
CN2	K - 1	IC81	H - 1
CN13	C - 10	IC82	I - 2
CN14	J - 10	IC83	I - 3
		IC84	I - 4
D1	B - 9	IC85	I - 6
D2	G - 2	IC86	I - 7
D3	H - 9	IC87	I - 8
D4	I - 9	IC88	I - 9
D5	I - 9	IC89	I - 10
D6	J - 2	IC90	I - 1
D7	C - 2	IC91	J - 2
		IC92	J - 2
DB1	J - 10	IC93	K - 3
DB2	J - 10	IC94	J - 4
DB3	K - 10	IC95	J - 5
DB4	K - 10	IC96	J - 6
DB5	L - 1	IC97	J - 7
DB6	L - 2	IC98	K - 8
DB7	L - 10	IC99	J - 9
DB8	L - 10	IC100	K - 2
		IC101	K - 4
IC1	A - 2	IC102	K - 5
IC2	A - 3	IC103	K - 6
IC3	A - 4	IC104	K - 9
IC4	A - 5	IC105	K - 10
IC5	A - 6	IC106	L - 10
IC6	A - 7		
IC7	A - 8	RV1	H - 2
IC8	A - 9		
IC9	A - 10	S1	F - 2
IC10	B - 3	S2	D - 2
IC11	B - 4	S3	D - 1
IC12	B - 5	S4	E - 1
IC13	B - 6	S5	F - 1
IC14	B - 7	S6	F - 1
IC15	B - 8	S7	G - 1
IC16	B - 8		
IC17	B - 9	TP1	G - 1
IC18	B - 10	TP2	H - 1
IC19	C - 3	TP3	H - 1
IC20	C - 4	TP4	H - 1
IC21	C - 5	TP5	H - 1
IC22	C - 6	TP6	H - 1
IC23	C - 7	TP7	H - 1
IC24	C - 8	TP8	H - 1
IC25	C - 8	TP9	I - 1
IC26	C - 9	TP10	I - 1
IC27	C - 10	TP11	I - 1
IC28	D - 1	TP12	I - 1
IC29	D - 2		
IC30	D - 3	TPE1	I - 1
IC31	D - 4		
IC32	D - 5	TPV1	G - 1
IC33	D - 6		
IC34	D - 7	X1	K - 7
IC35	D - 8		
IC36	D - 8		
IC37	D - 9		
IC38	D - 10		
IC39	E - 1		
IC40	E - 2		
IC41	E - 3		
IC42	E - 4		
IC43	E - 5		
IC44	E - 6		
IC45	E - 7		
IC46	E - 8		
IC47	E - 8		
IC48	E - 9		
IC49	E - 10		
IC50	F - 1		
IC51	F - 2		
IC52	F - 3		
IC53	F - 4		
IC54	F - 5		
IC55	F - 6		
IC56	F - 7		
IC57	F - 8		
IC58	F - 8		
IC59	F - 9		
IC60	F - 10		
IC61	G - 1		
IC62	G - 2		
IC63	G - 3		
IC64	G - 4		
IC65	G - 5		
IC66	G - 6		
IC67	G - 7		
IC68	F - 8		
IC69	F - 8		
IC70	G - 9		
IC71	G - 10		
IC72	H - 1		
IC73	H - 2		
IC74	H - 3		
IC75	H - 4		
IC76	H - 6		
IC78	H - 8		
IC79	H - 9		

TC-28 (1/2) TC-28 (1/2)

TC-28 (1/2) (TIME CODE GENERATOR)

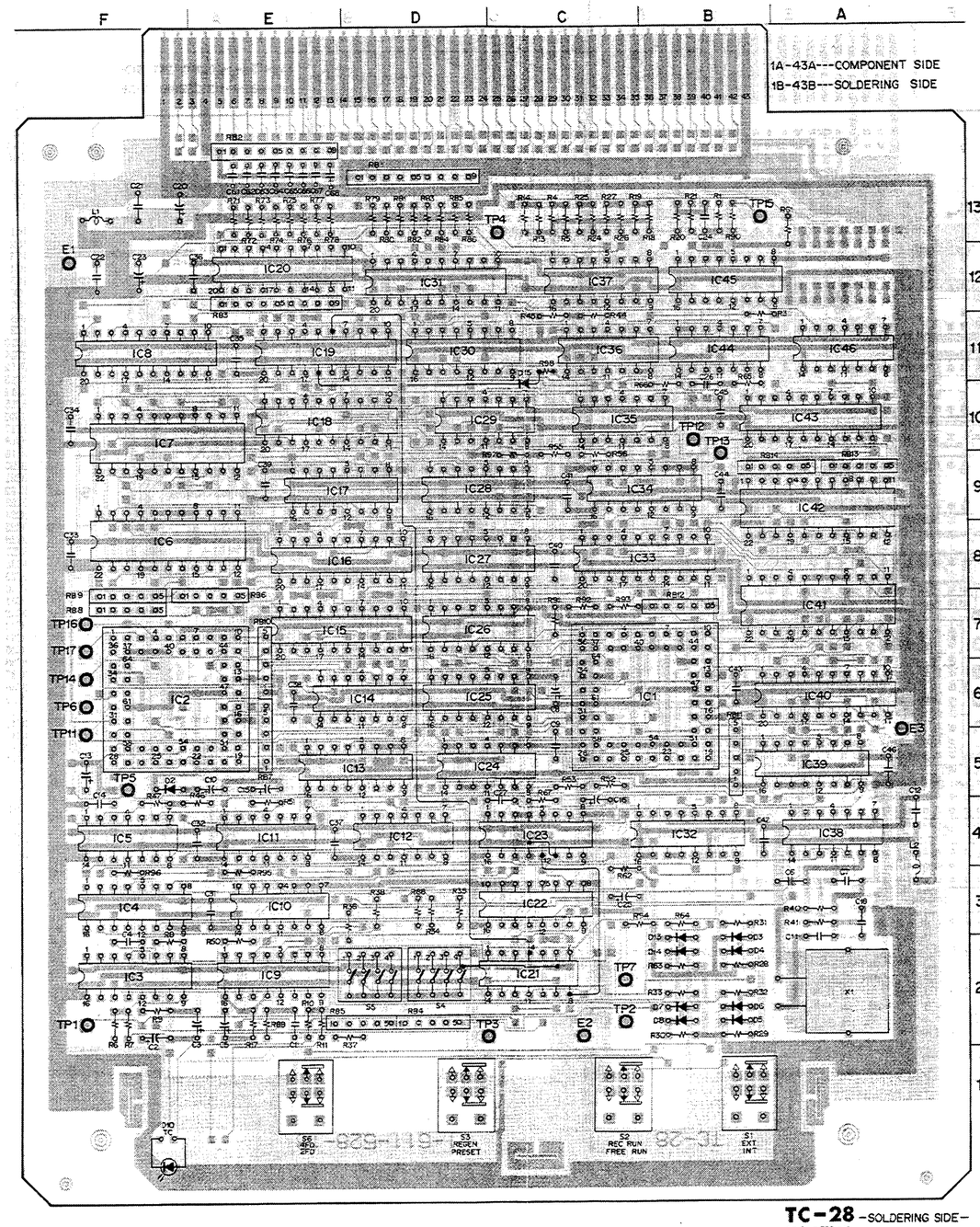




TC-28(1/2)

1-611-528-13
BVW-40
BVW-40P

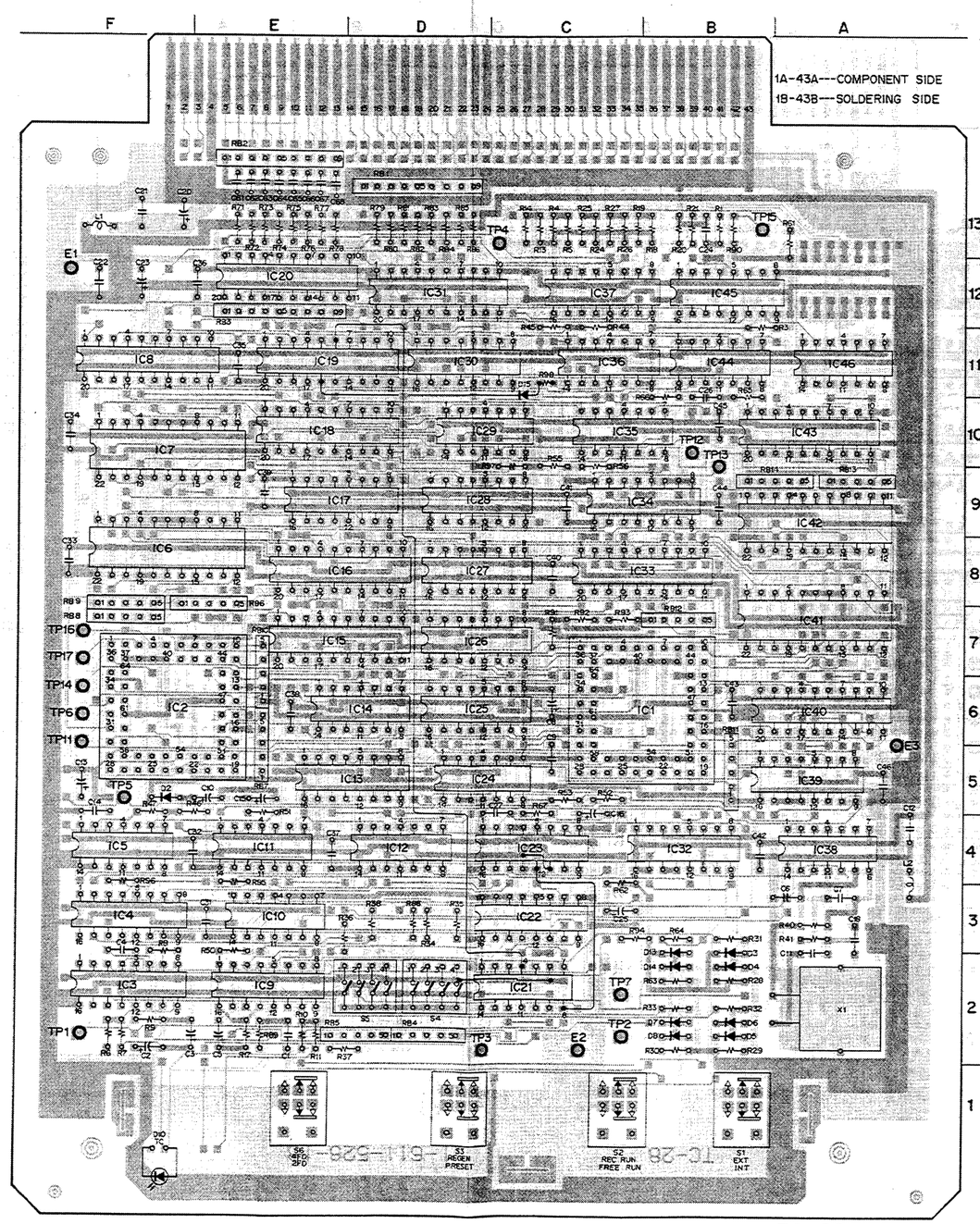
TC-28 (TIME CODE GENERATOR)



TC-28 –SOLDERING SIDE–
1-611-628-13
9V-W-40P

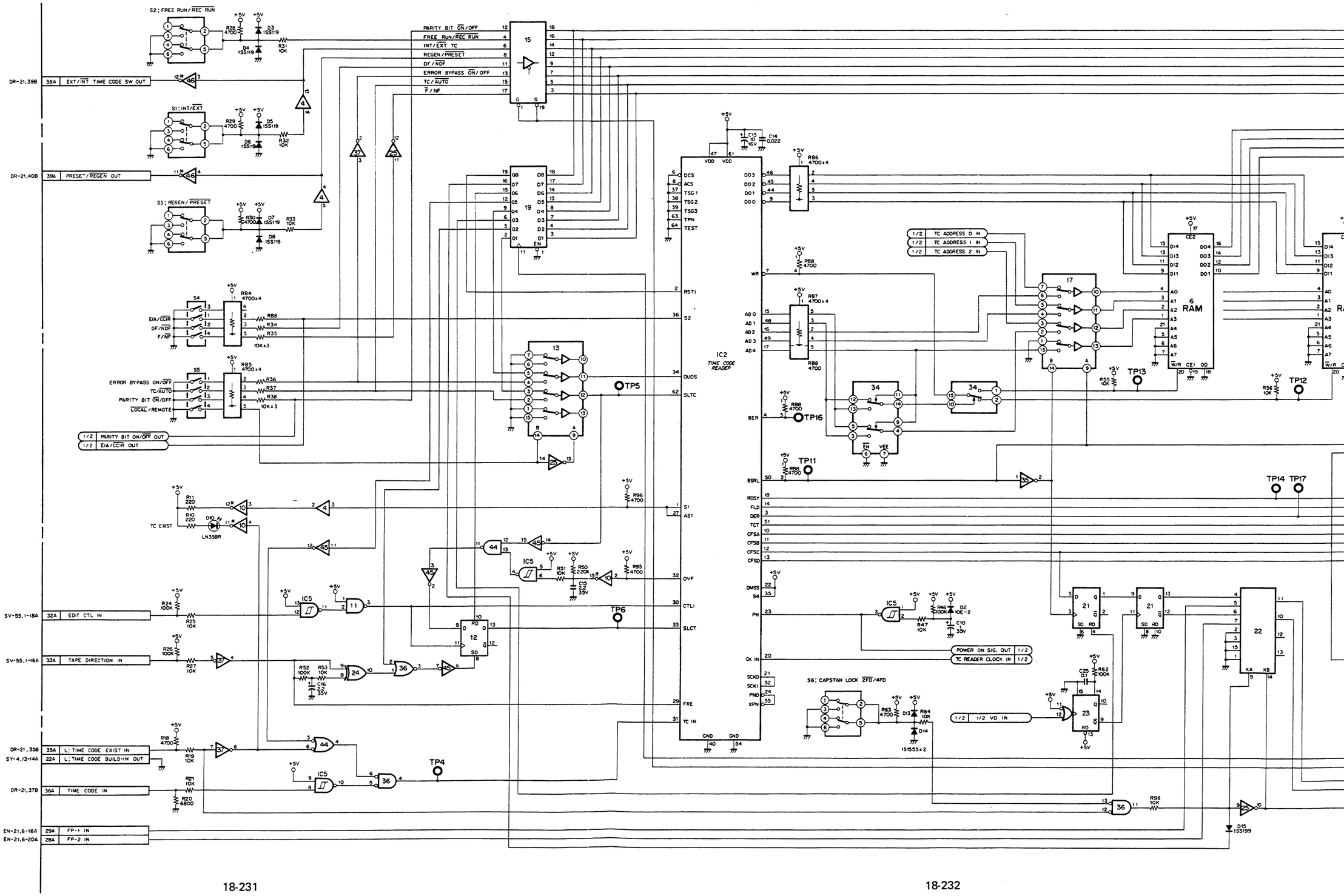
D2	F - 5
D3	B - 3
D4	B - 2
D5	B - 2
D6	B - 2
D7	B - 2
D8	B - 2
D10	F - 1
D13	B - 3
D14	B - 2
D15	C - 11
E1	F - 12
E2	C - 2
E3	A - 6
IC1	C - 6
IC2	F - 6
IC3	F - 2
IC4	F - 3
IC5	F - 4
IC6	F - 8
IC7	F - 10
IC8	F - 11
IC9	E - 2
IC10	E - 3
IC11	E - 4
IC12	D - 4
IC13	D - 5
IC14	D - 6
IC15	E - 7
IC16	E - 8
IC17	E - 9
IC18	E - 10
IC19	E - 11
IC20	E - 12
IC21	C - 3
IC22	C - 4
IC23	C - 5
IC24	D - 5
IC25	D - 6
IC26	D - 7
IC27	D - 8
IC28	D - 9
IC29	D - 10
IC30	D - 11
IC31	D - 12
IC32	B - 4
IC33	C - 8
IC34	C - 9
IC35	C - 10
IC36	C - 11
IC37	C - 12
IC38	A - 4
IC39	A - 5
IC40	A - 6
IC41	A - 7
IC42	A - 9
IC43	A - 10
IC44	B - 11
IC45	B - 12
IC46	A - 11
RB1	D - 13
RB2	E - 13
RB3	E - 12
RB4	D - 2
RB5	E - 2
RB6	E - 7
RB7	E - 5
RB8	F - 7
RB9	F - 7
RB10	E - 7
RB11	B - 5
RB12	B - 7
RB13	A - 9
RB14	A - 9
S1	B - 1
S2	C - 1
S3	D - 1
S4	D - 2
S5	D - 2
S6	E - 1
TP1	F - 2
TP2	C - 2
TP3	D - 2
TP4	C - 13
TP5	F - 5
TP6	F - 6
TP7	C - 3
TP11	F - 6
TP12	B - 10
TP13	B - 10
TP14	F - 6
TP15	B - 13
TP16	F - 7
TP17	F - 7
X1	A - 2

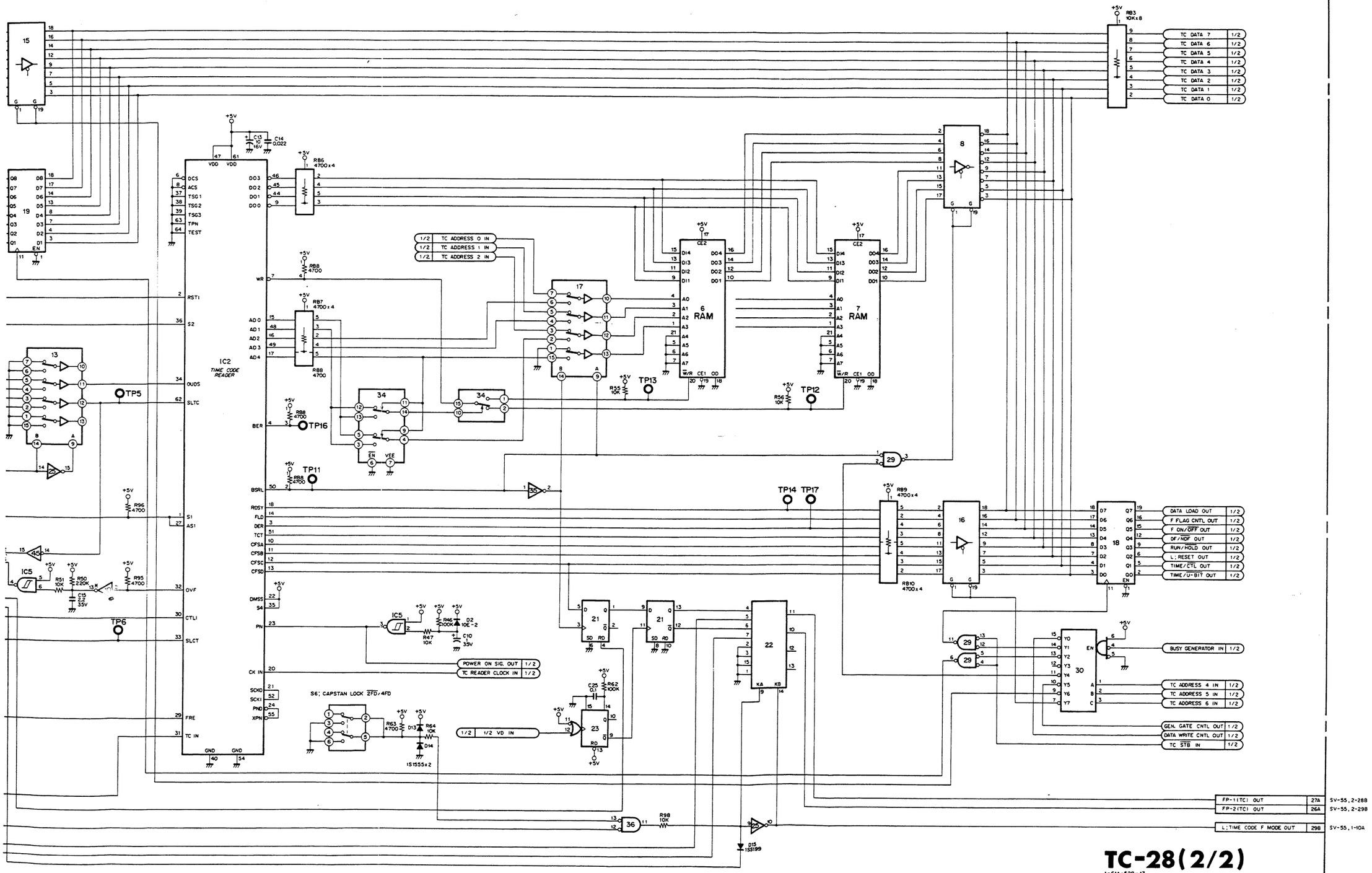
TC-28 (TIME CODE READER)



D2	F - 5
D3	B - 3
D4	B - 2
D5	B - 2
D6	B - 2
D7	B - 2
D8	B - 2
D10	F - 1
D13	B - 3
D14	B - 2
D15	C - 11
E1	F - 12
E2	C - 2
E3	A - 6
IC1	C - 6
IC2	F - 6
IC3	F - 2
IC4	F - 3
IC5	F - 4
IC6	F - 8
IC7	F - 10
IC8	F - 11
IC9	E - 2
IC10	E - 3
IC11	E - 4
IC12	D - 4
IC13	D - 5
IC14	D - 6
IC15	E - 7
IC16	E - 8
IC17	E - 9
IC18	E - 10
IC19	E - 11
IC20	E - 12
IC21	C - 3
IC22	C - 4
IC23	C - 5
IC24	D - 5
IC25	D - 6
IC26	D - 7
IC27	D - 8
IC28	D - 9
IC29	D - 10
IC30	D - 11
IC31	D - 12
IC32	B - 4
IC33	C - 8
IC34	C - 9
IC35	C - 10
IC36	C - 11
IC37	C - 12
IC38	A - 4
IC39	A - 5
IC40	A - 6
IC41	A - 7
IC42	A - 9
IC43	A - 10
IC44	B - 11
IC45	B - 12
IC46	A - 11
RB1	D - 13
RB2	E - 13
RB3	E - 12
RB4	D - 2
RB5	E - 2
RB6	E - 7
RB7	E - 5
RB8	F - 7
RB9	F - 7
RB10	E - 7
RB11	B - 5
RB12	B - 7
RB13	A - 9
RB14	A - 9
S1	B - 1
S2	C - 1
S3	D - 1
S4	D - 2
S5	D - 2
S6	E - 1
TP1	F - 2
TP2	C - 2
TP3	D - 2
TP4	C - 13
TP5	F - 5
TP6	F - 6
TP7	C - 3
TP11	F - 6
TP12	B - 10
TP13	B - 10
TP14	F - 8
TP15	B - 13
TP16	F - 7
TP17	F - 7
X1	A - 2

TC-28 (2/2) (TIME CODE READER)



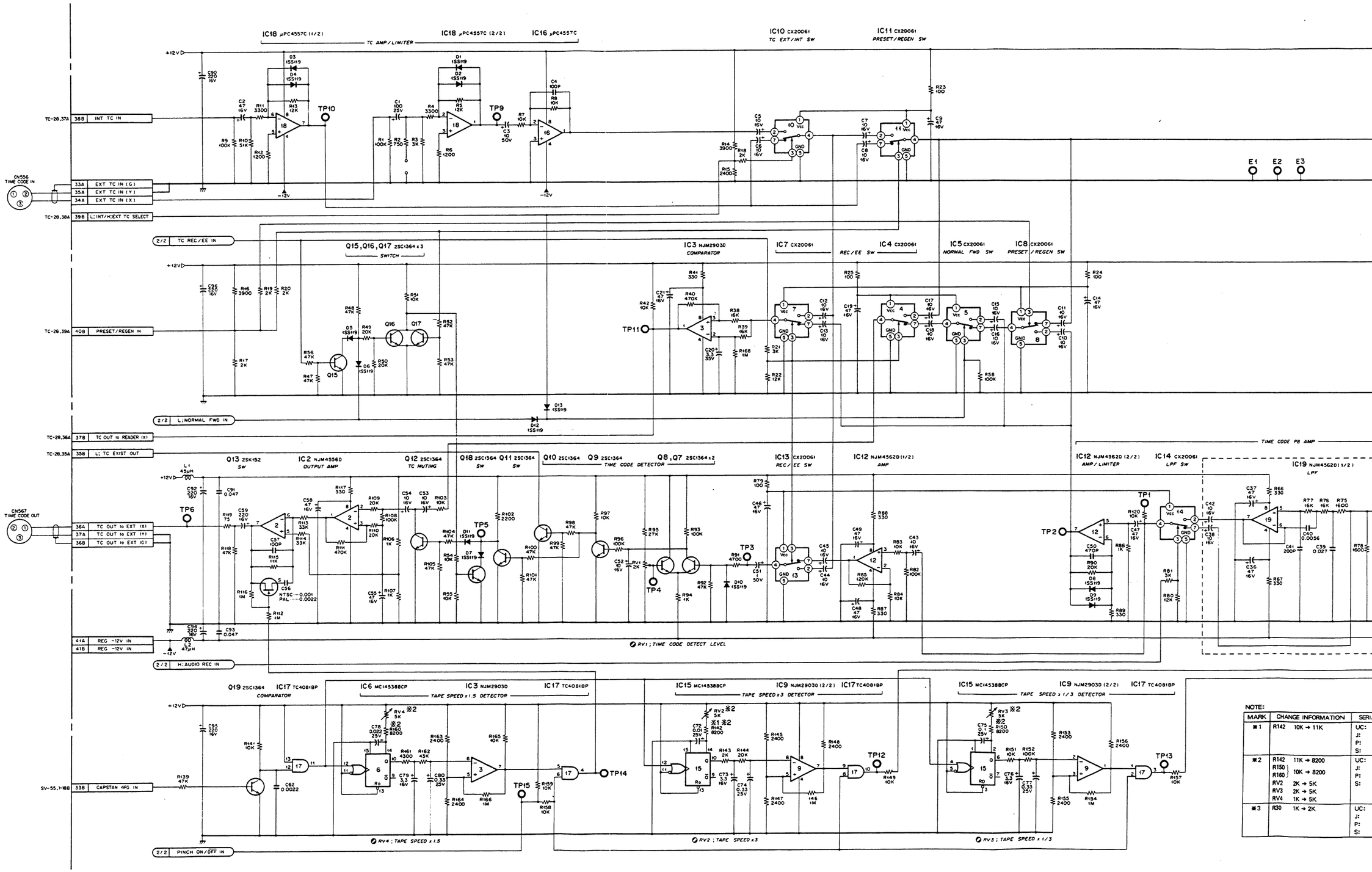


TC-28(2/2)

1-611-528-13
8V9-40P

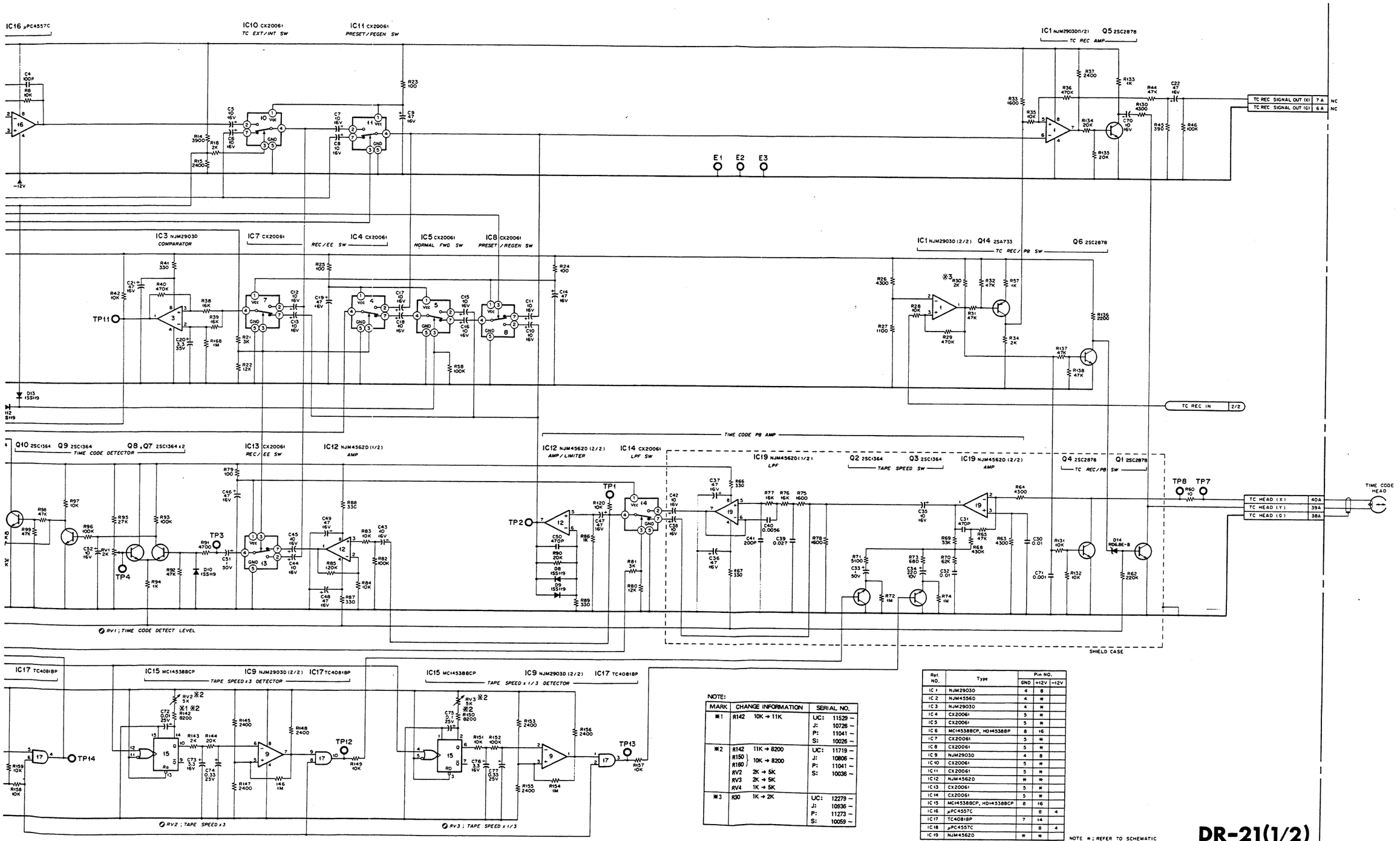
DR-21 (1/2) DR-21 (1/2)

DR-21 (1/2) (TIME CODE REC PB AMPLIFIER)



NOTE:

MARK	CHANGE INFORMATION		SERI
※1	R142	10K → 11K	UC: J: P: S:
※2	R142 R150 R160 RV2 RV3 RV4	11K → 8200 10K → 8200 2K → 5K 2K → 5K 1K → 5K	UC: J: P: S:
※3	R30	1K → 2K	UC: J: P: S:



NOTE:

MARK	CHANGE INFORMATION		SERIAL NO.
※1	R142	10K → 11K	UC: 11529 ~ J: 10726 ~ P: 11041 ~ S: 10026 ~
※2	R142 R150 R160	11K → 8200 10K → 8200	UC: 11719 ~ J: 10808 ~ P: 11041 ~ S: 10036 ~
	RV2 RV3 RV4	2K → 5K 2K → 5K 1K → 5K	
※3	R30	1K → 2K	UC: 12279 ~ J: 10836 ~ P: 11273 ~ S: 10059 ~

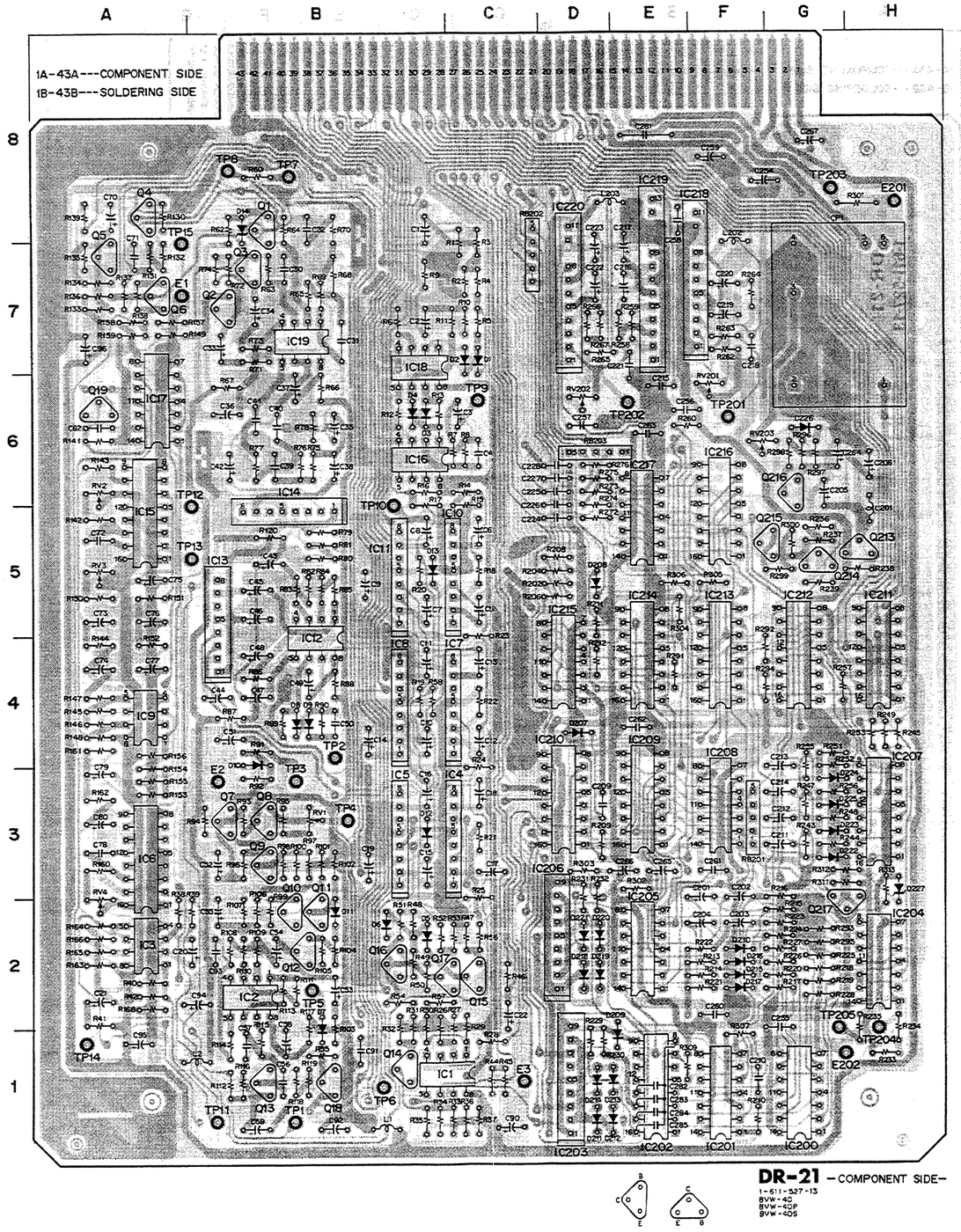
Ref. NO.	Type	Pin NO. GND	+12V	-12V
IC 1	NJM2903D	4	8	
IC 2	NJM4556D	4	※	
IC 3	NJM2903D	4	※	
IC 4	CX20061	5	※	
IC 5	CX20061	5	※	
IC 6	MC14538BCP, HD14538BP	8	16	
IC 7	CX20061	5	※	
IC 8	CX20061	5	※	
IC 9	NJM2903D	4	8	
IC 10	CX20061	5	※	
IC 11	CX20061	5	※	
IC 12	NJM4562D	※	※	
IC 13	CX20061	5	※	
IC 14	CX20061	5	※	
IC 15	MC14538BCP, HD14538BCP	8	16	
IC 16	μPC4557C		8	4
IC 17	TC4081BP	7	14	
IC 18	μPC4557C		8	4
IC 19	NJM4562D	※	※	

NOTE ※ ; REFER TO SCHEMATIC

DR-21(1/2)

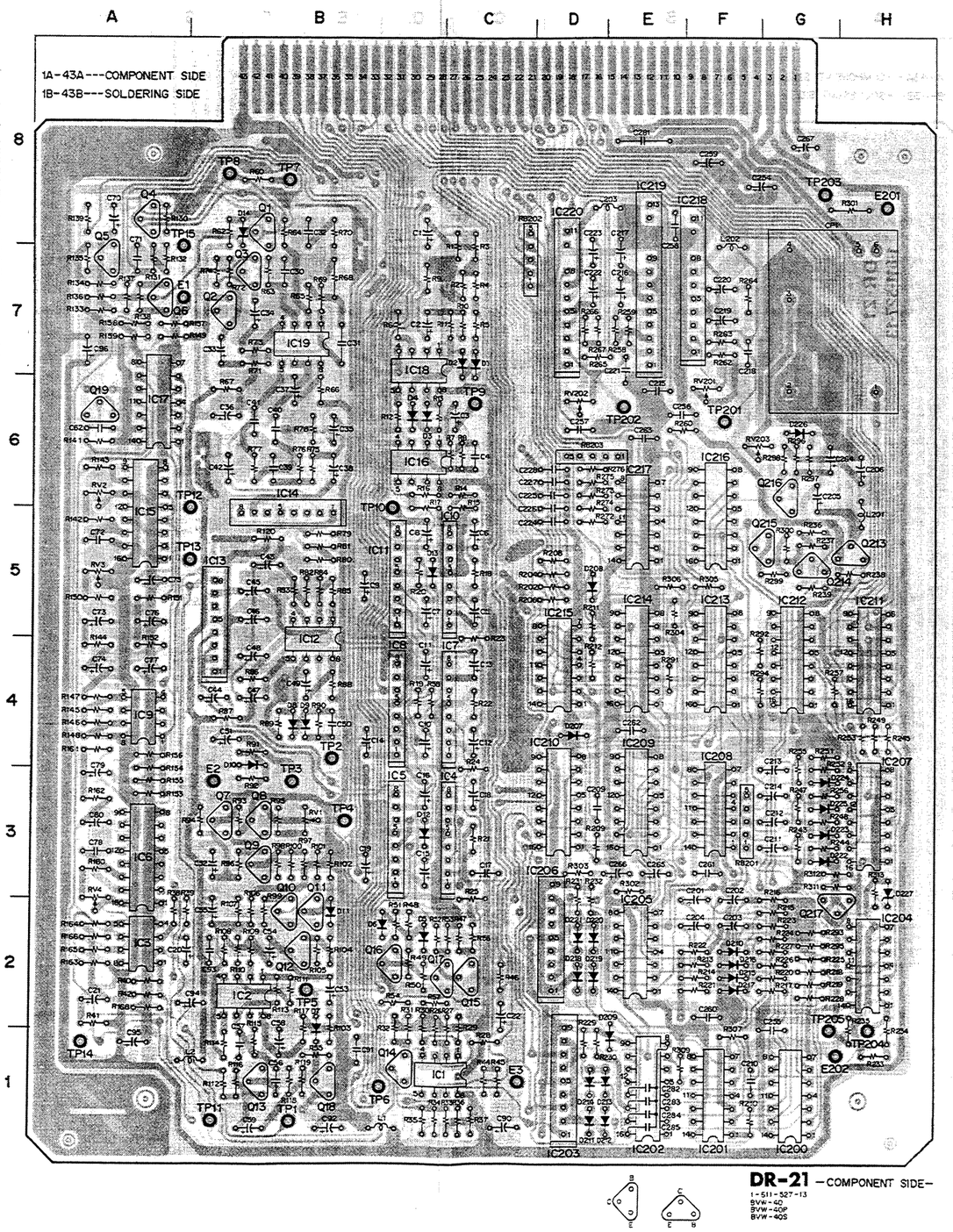
1-611-527-13
8VW-40
8VW-40P
8VW-40S

DR-21 (TIME CODE REC PB AMPLIFIER)



CP1	G - 7	Q1	B - 8
		Q2	B - 7
D1	C - 7	Q3	B - 7
D2	C - 7	Q4	A - 8
D3	B - 6	Q5	A - 7
D4	B - 6	Q6	A - 7
D5	B - 2	Q7	B - 3
D6	B - 2	Q8	B - 3
D7	B - 2	Q9	B - 3
D8	B - 4	Q10	B - 2
D9	B - 4	Q11	B - 2
D10	B - 4	Q12	B - 2
D11	B - 2	Q13	B - 1
D12	B - 3	Q14	B - 1
D13	B - 5	Q15	C - 2
D14	B - 8	Q16	B - 2
D207	D - 4	Q17	C - 2
D208	D - 5	Q18	B - 1
D209	E - 1	Q19	A - 6
D210	F - 2	Q213	H - 5
D211	D - 1	Q214	G - 5
D212	D - 1	Q215	G - 5
D213	D - 1	Q216	G - 6
D214	D - 1	Q217	G - 2
D215	F - 2		
D216	F - 2	RB201	F - 3
D217	F - 2	RB202	C - 7
D218	D - 2	RB203	D - 6
D219	D - 2		
D220	D - 2	RV1	B - 3
D221	D - 2	RV2	A - 6
D222	G - 3	RV3	A - 5
D223	G - 3	RV4	A - 3
D224	G - 3	RV201	F - 6
D225	G - 3	RV202	D - 6
D226	G - 6	RV203	F - 6
D227	H - 3		
		TP1	B - 1
E1	A - 7	TP2	B - 4
E2	B - 3	TP3	B - 3
E3	C - 1	TP4	B - 3
E201	H - 8	TP5	B - 2
E202	G - 1	TP6	B - 1
		TP7	B - 8
IC1	C - 1	TP8	B - 8
IC2	B - 2	TP9	C - 6
IC3	A - 2	TP10	B - 6
IC4	C - 3	TP11	B - 1
IC5	B - 3	TP12	B - 6
IC6	A - 3	TP13	B - 5
IC7	C - 4	TP14	A - 1
IC8	B - 4	TP15	A - 7
IC9	A - 4	TP201	F - 6
IC10	C - 5	TP202	E - 6
IC11	B - 5	TP203	G - 8
IC12	B - 5	TP204	H - 2
IC13	B - 5	TP205	G - 2
IC14	B - 5		
IC15	A - 5		
IC16	B - 6		
IC17	A - 6		
IC18	B - 7		
IC19	B - 7		
IC200	G - 1		
IC201	F - 1		
IC202	E - 1		
IC203	D - 1		
IC204	H - 2		
IC205	E - 2		
IC206	D - 2		
IC207	H - 3		
IC208	F - 3		
IC209	E - 3		
IC210	D - 3		
IC211	H - 4		
IC212	G - 4		
IC213	F - 4		
IC214	E - 4		
IC215	D - 4		
IC216	F - 5		
IC217	E - 5		
IC218	F - 7		
IC219	E - 7		
IC220	D - 7		

DR-21 (TAPE/HUMID SENSOR) (MOTOR/SOLENOID DRIVER)



CP1	G - 7	Q1	B - 3
		Q2	B - 7
D1	C - 7	Q3	B - 7
D2	C - 7	Q4	A - 8
D3	B - 6	Q5	A - 7
D4	B - 6	Q6	A - 7
D5	B - 2	Q7	B - 3
D6	B - 2	Q8	B - 3
D7	B - 2	Q9	B - 3
D8	B - 4	Q10	B - 2
D9	B - 4	Q11	B - 2
D10	B - 4	Q12	B - 2
D11	B - 2	Q13	B - 1
D12	B - 3	Q14	B - 1
D13	B - 5	Q15	C - 2
D14	B - 8	Q16	B - 2
D207	D - 4	Q17	C - 2
D208	D - 5	Q18	B - 1
D209	E - 1	Q19	A - 6
D210	F - 2	Q213	H - 5
D211	D - 1	Q214	G - 5
D212	D - 1	Q215	G - 5
D213	D - 1	Q216	G - 6
D214	D - 1	Q217	G - 2
D215	F - 2		
D216	F - 2	RB201	F - 3
D217	F - 2	RB202	C - 7
D218	D - 2	RB203	D - 6
D219	D - 2		
D220	D - 2	RV1	B - 3
D221	D - 2	RV2	A - 6
D222	G - 3	RV3	A - 5
D223	G - 3	RV4	A - 3
D224	G - 3	RV201	F - 6
D225	G - 3	RV202	D - 6
D226	G - 6	RV203	F - 5
D227	H - 3		
		TP1	B - 1
E1	A - 7	TP2	B - 4
E2	B - 3	TP3	B - 3
E3	C - 1	TP4	B - 3
E201	H - 8	TP5	B - 2
E202	G - 1	TP6	B - 1
		TP7	B - 8
IC1	C - 1	TP8	B - 8
IC2	B - 2	TP9	C - 6
IC3	A - 2	TP10	B - 6
IC4	C - 3	TP11	B - 1
IC5	B - 3	TP12	B - 6
IC6	A - 3	TP13	B - 5
IC7	C - 4	TP14	A - 1
IC8	B - 4	TP15	A - 7
IC9	A - 4	TP201	F - 6
IC10	C - 5	TP202	E - 6
IC11	B - 5	TP203	G - 8
IC12	B - 5	TP204	H - 2
IC13	B - 5	TP205	G - 2
IC14	B - 5		
IC15	A - 5		
IC16	B - 6		
IC17	A - 6		
IC18	B - 7		
IC19	B - 7		
IC200	G - 1		
IC201	F - 1		
IC202	E - 1		
IC203	D - 1		
IC204	H - 2		
IC205	E - 2		
IC206	D - 2		
IC207	H - 3		
IC208	F - 3		
IC209	E - 3		
IC210	D - 3		
IC211	H - 4		
IC212	G - 4		
IC213	F - 4		
IC214	E - 4		
IC215	D - 4		
IC216	F - 5		
IC217	E - 5		
IC218	F - 7		
IC219	E - 7		
IC220	D - 7		

DR-21 –COMPONENT SIDE–

1-511-527-13
8VW-40
8VW-40P
8VW-40S

DR-21 (2/2) (TAPE/HUMID SENSOR) (MOTOR/SOLENOID DRIVER)

NOTE:

MARK	CHANGE INFORMATION		SERIAL NO.
※1	C282	0.047 ADDED	UC: 11719 ~
	C283		J: 10806 ~
	C284		P: 11101 ~
	C285		S: 10036 ~

Ref. NO.	Type	Pin NO. GND	5V	12V	15V
IC200	TC4071BP	7		14	
IC201	SN74LS37N	7	14		
IC202	M54523P	8			9
IC203	M54543L	5 ※			1,9
IC204	TC4001BP	7	14		
IC205	M54529AP	7	14		
IC206	M54543L	5 ※			1,9
IC207	TC4049BP	8	1		
IC208	M54529AP	7	14		
IC209	MC14094BCP, MSM4094RS	8	16		
IC210	TC4050BP	8	1		
IC211	M54532P	4※,5※,12※,13※			1,8
IC212	M54523P	8 ※			9
IC213	TC4049BP	8	1		
IC214	MC14094BCP, MSM4094RS	8	16		
IC215	MC14584BCP, μPD4584BC	7	14		
IC216	TC4021BP	8	16		
IC217	MC14584BCP, μPD4584BC	7	14		
IC218	BX342	4		1,10	
IC219	BX343	7		13	
IC220	BX342	4		1,10	

NOTE ※: UNREG GND

Ref. NO.	Type	Pin NO. GND	5V	12V	15V
IC200	TC4071BP	7		14	
IC201	SN74LS37N	7	14		
IC202	M54523P	8			9
IC203	M54543L	5 *			1,9
IC204	TC4001BP	7	14		
IC205	M54529AP	7	14		
IC206	M54543L	5 *			1,9
IC207	TC4049BP	8	1		
IC208	M54529AP	7	14		
IC209	MC14094BCP, MSM4094RS	8	16		
IC210	TC4050BP	8	1		
IC211	M54532P	4*,5*,12,13			1,8
IC212	M54523P	8 *			9
IC213	TC4049BP	8	1		
IC214	MC14094BCP, MSM4094RS	8	16		
IC215	MC14584BCP, μPD4584BC	7	14		
IC216	TC4021BP	8	16		
IC217	MC14584BCP, μPD4584BC	7	14		
IC218	BX342	4		1,10	
IC219	BX343	7		13	
IC220	BX342	4		1,10	

NOTE *; UNREG GND

IC206 M54543L
THREADING MOTOR DRIVER

IC203 M54543L
CASSETTE UP MOTOR DRIVER

SERIAL TO PARALLEL DATA CONVERTER

PARALLEL TO SERIAL DATA CONVERTER

Q217 2SA1175

Q213 2SA773 Q214 2SC2878 Q216,Q215 2SC1364 x 2
FULL ERASE CONTROL

CP201 75KHz OSC

RV203; ERASE CURRENT

SY-4,13-5A 24B SERIAL DATA-4 IN
SY-4,14-29B 23B SYS CK-3 IN
SY-4,13-3A 22B STB CK-3 IN
SY-4,13-1A 21B L;POWER RESET IN
SY-4,13-6B 26B SERIAL DATA-5 IN
SY-4,13-2A 22A L;REC CONT IN

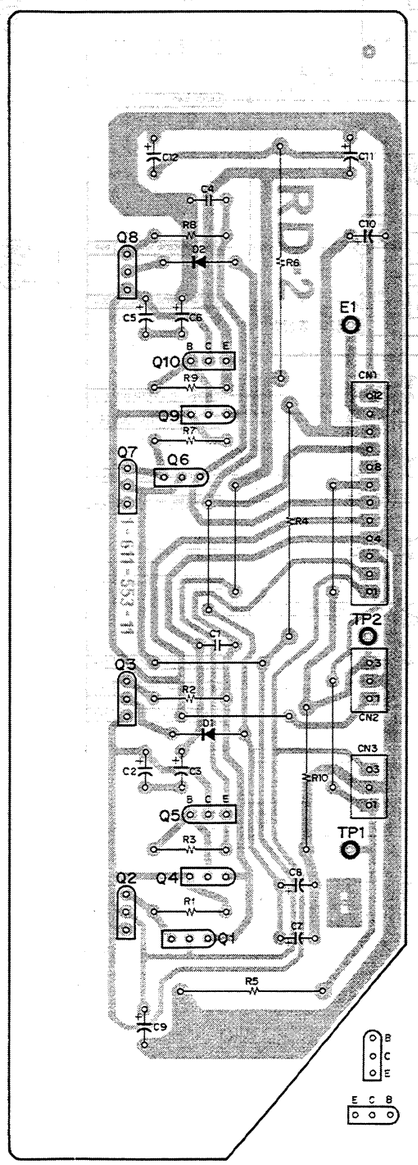
UNREG +15V IN 2A
UNREG +15V IN 2B
THREADING MOTOR (+) OUT 25A
THREADING MOTOR (-) OUT 26A
UNREG GND 1A MB-52, 303-5/303-6
CAS UP MOTOR (+) OUT 20B
CAS UP MOTOR (-) OUT 20A
T-BRAKE SOL STARTER OUT 29A DU-53, 1-6
T-BRAKE SOL HOLDER OUT 29B DU-53, 1-5
S-BRAKE SOL STARTER OUT 30A DU-53, 1-4
S-BRAKE SOL HOLDER OUT 30B DU-53, 1-3
PINCH SOL STARTER OUT 17A PD-22, 1-2
PINCH SOL HOLDER OUT 18B CL-7, 1-8
PINCH ON/OFF OUT 1/2
MAIN SOL STARTER OUT 28A DU-53, 1-1
MAIN SOL HOLDER OUT 28B DU-53, 1-2
L;CLEANER SOL ON OUT 31A PD-22, 1-3
L;NORMAL FWD OUT 1/2
FULL ERASE HEAD (X) 15A
FULL ERASE HEAD (Y) 14A
FULL ERASE HEAD (G) 16A
H;AUDIO REC OUT 1/2
TC REC OUT 1/2
TC REC/EE OUT 1/2
SERIAL DATA-1 OUT 25B SY-4,14-30B

H;TAPE BEG
H;TAPE END
H;MUMID
H;REC UNEN
Cc IN SW
Cc DOWN SW
THR END L SW
END L SW

M841 THREADING MOTOR
M801 CASSETTE UP MOTOR
FULL ERASE HEAD

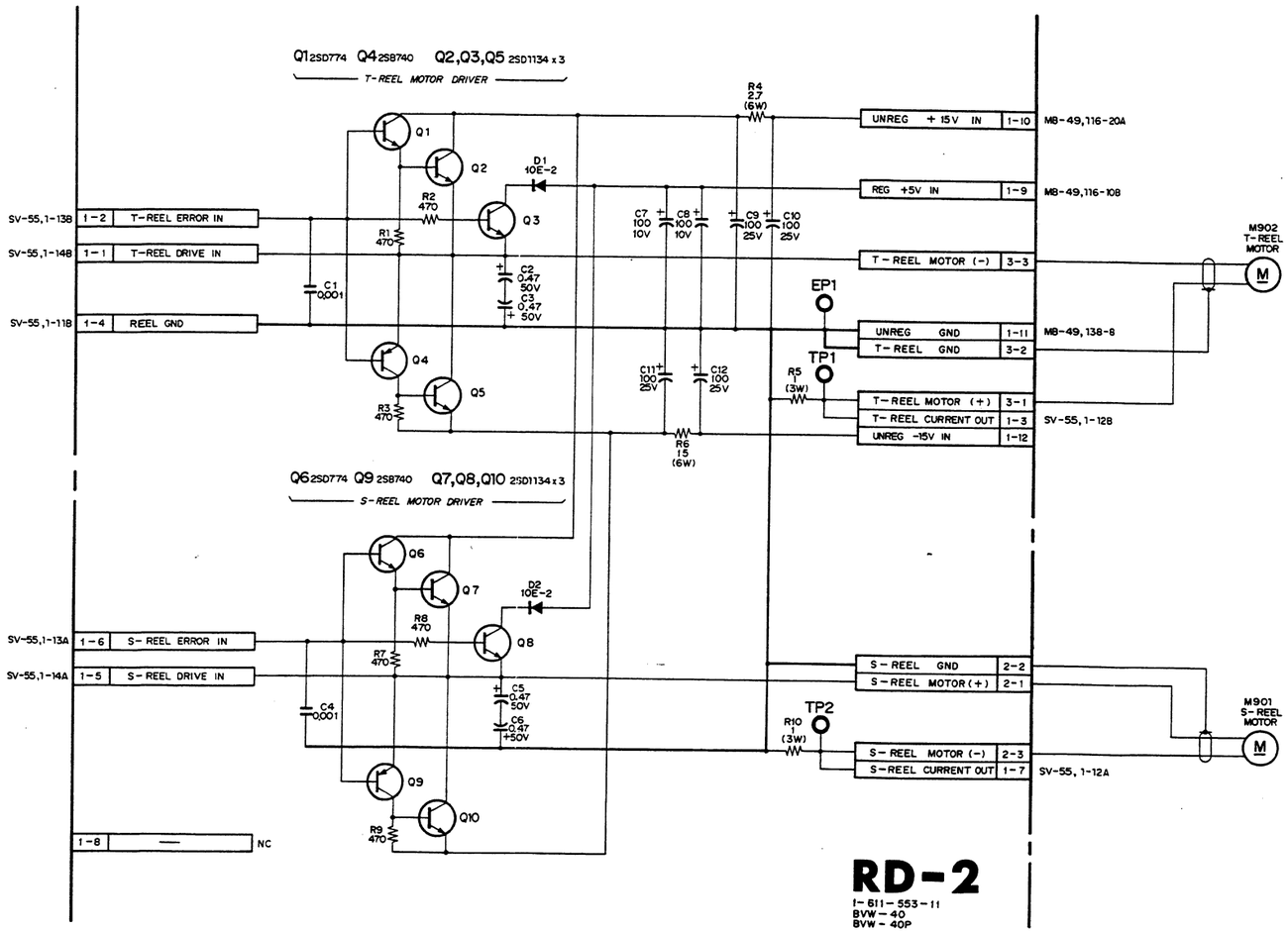
DR-21(2/2)
1-611-527-13
BVW-40
BVW-40P
BVW-40S

RD-2 (REEL MOTOR DRIVER)

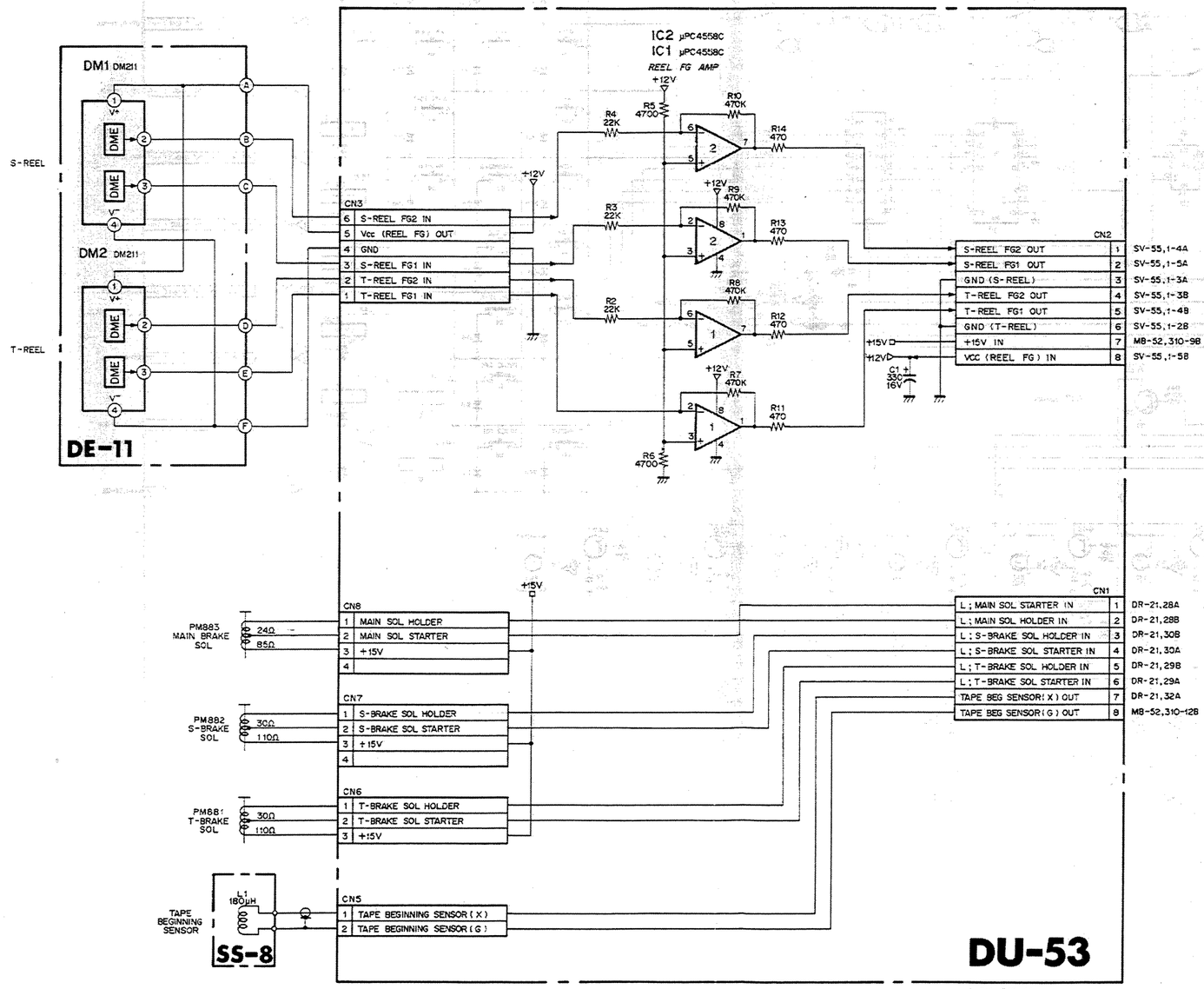


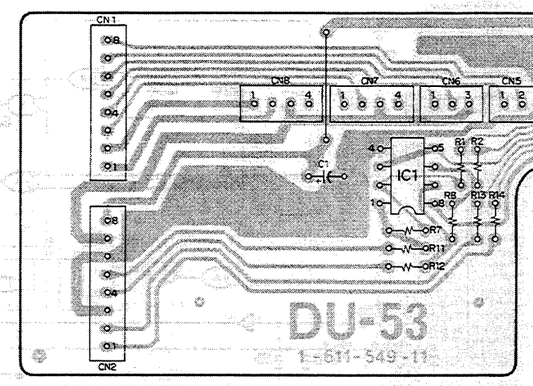
RD-2 -SOLDERING SIDE-

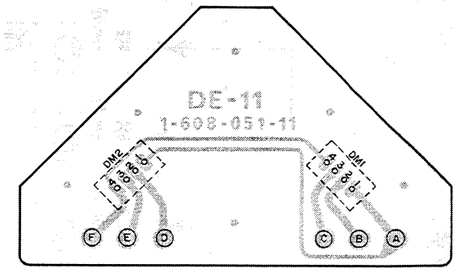
1-611-553-11
BVW-40
BVW-40P


Q1 2SD774 Q4 2SB740 Q2,Q3,Q5 2SD1134 x 3
T-REEL MOTOR DRIVER
Q1
Q2
Q3
Q4
Q5
D1 10E-2
R1 470
R2 470
R3 470
R4 2.7 (6W)
R5 1 (3W)
R6 15 (6W)
C1 0.001
C2 0.47 50V
C3 0.47 50V
C7 100 10V
C8 100 10V
C9 100 25V
C10 100 25V
C11 100 25V
C12 100 25V
SV-55,1-138 1-2 T-REEL ERROR IN
SV-55,1-148 1-1 T-REEL DRIVE IN
SV-55,1-118 1-4 REEL GND
UNREG +15V IN 1-10 M8-49,116-20A
REG +5V IN 1-9 M8-49,116-108
T-REEL MOTOR (-) 3-3
UNREG GND 1-11 M8-49,138-8
T-REEL GND 3-2
T-REEL MOTOR (+) 3-1
T-REEL CURRENT OUT 1-3 SV-55,1-128
UNREG -15V IN 1-12
EP1
TP1
M902 T-REEL MOTOR
Q6 2SD774 Q9 2SB740 Q7,Q8,Q10 2SD1134 x 3
S-REEL MOTOR DRIVER
Q6
Q7
Q8
Q9
Q10
D2 10E-2
R7 470
R8 470
R9 470
R10 1 (3W)
C4 0.001
C5 0.47 50V
C6 0.47 50V
SV-55,1-13A 1-6 S-REEL ERROR IN
SV-55,1-14A 1-5 S-REEL DRIVE IN
1-8 — NC
S-REEL GND 2-2
S-REEL MOTOR (+) 2-1
S-REEL MOTOR (-) 2-3
S-REEL CURRENT OUT 1-7 SV-55, 1-12A
TP2
M901 S-REEL MOTOR
RD-2
1-611-553-11
BVW-40
BVW-40P

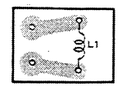
DU-53 (REEL FG AMPLIFIER)
DE-11
SS-8





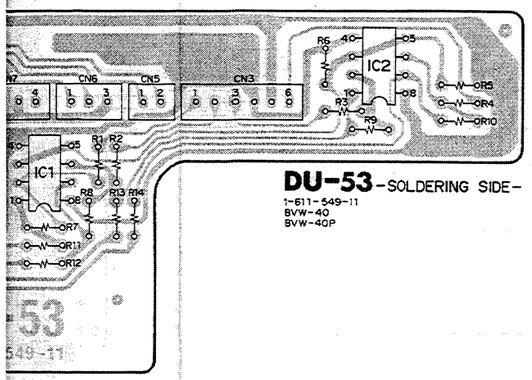


DE-11 -SOLDERING SIDE-
1-608-051-11
BVW-40
BVW-40P



SS-8 -SOLDERING SIDE-
1-586-946-12
BVW-40
BVW-40P

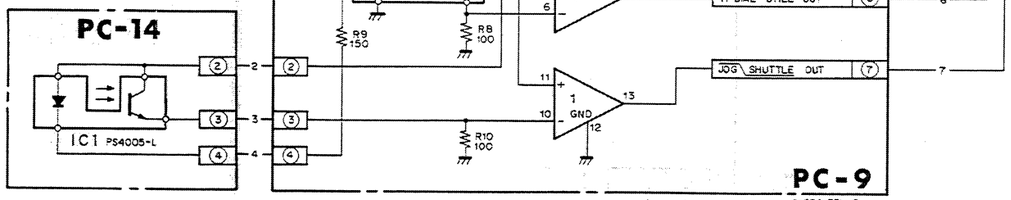
PC-9 (SEARCH DIAL)
PC-14



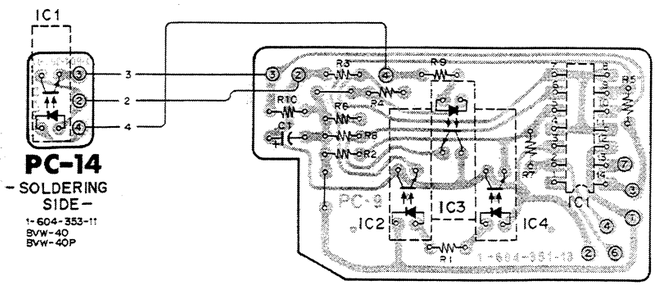
DU-53 -SOLDERING SIDE-
1-611-549-11
BVW-40
BVW-40P



-SOLDERING SIDE-



1-604-351-13
BVW-40
BVW-40P



PC-14
- SOLDERING SIDE -
1-604-353-11
BVW-40
BVW-40P

PC-9 -SOLDERING SIDE-
1-604-351-13
BVW-40
BVW-40P

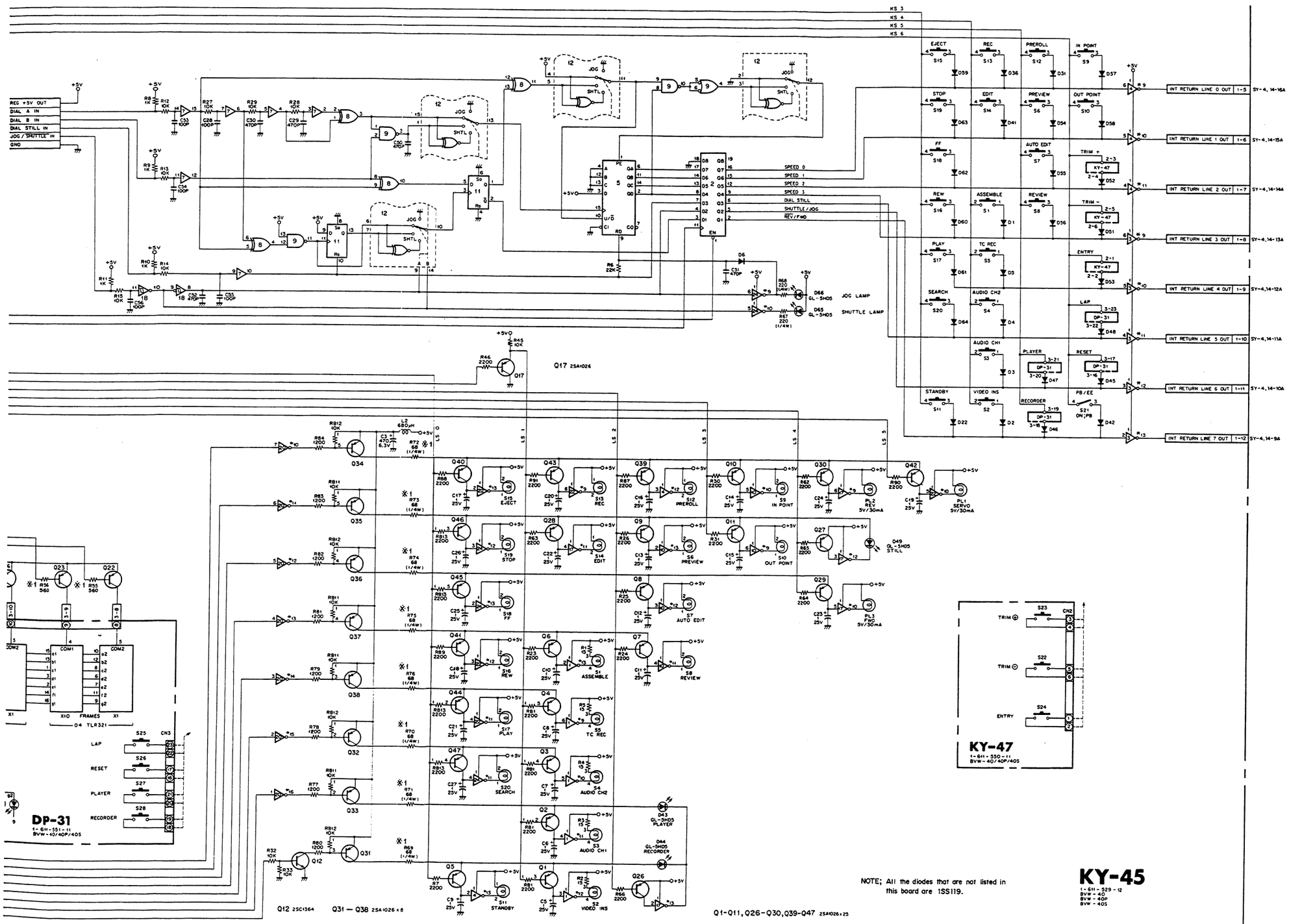
KY-45 (KEY PANEL/TIME COUNTER DISPLAY)
KY-47
DP-31
PT-9

NOTE:

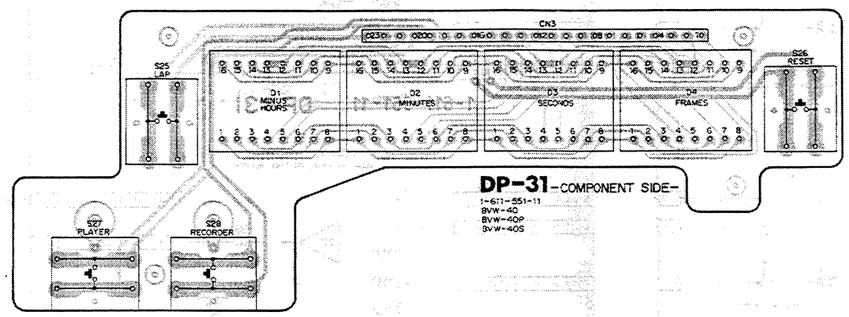
MARK	CHANGE INFORMATION	SERIAL NO.
※1	R55 ~ R61 510 ~ 560 R69 ~ R76 62 ~ 68 R92 510 ~ 560	UC: 11031 ~ J: 10476 ~ P: 10711 ~ S: 10011 ~

Ref. No.	Type	Pin No. GND	Pin No. +5V
IC 1	M54529AP	7	14
IC 2	TC40H374P	10	20
IC 3	M54529AP	7	14
IC 4	M54529AP	7	14
IC 5	TC4516BP	8	16
IC 6	M54517P	8	
IC 7	TC4050BP	8	1
IC 8	MC14070BCP, M88407OB	7	14
IC 9	TC40H8P	7	14
IC 10	M54529AP	7	14
IC 11	TC40I38P	7	14
IC 12	TC4519BP, μPD4519BC	8	16
IC 13	TC40H240P	10	20
IC 14	TC40H138P	8	16
IC 15	SN74LS138N	8	16
IC 16	SN74LS138N	8	16
IC 17	M54529AP	7	14
IC 18	MC14584BCP, μPD4584BC	7	14
IC 19	MC14584BCP, μPD4584BC	7	14
IC 20	M54517P	8	
IC 21	TC40H244P	10	20
IC 22	M54529AP	7	14
IC 23	TC40H374P	10	20
IC 24	M54529AP	7	14
IC 25	μPC7805H	3	

KY-45, KY-47, DP-31, PT-9

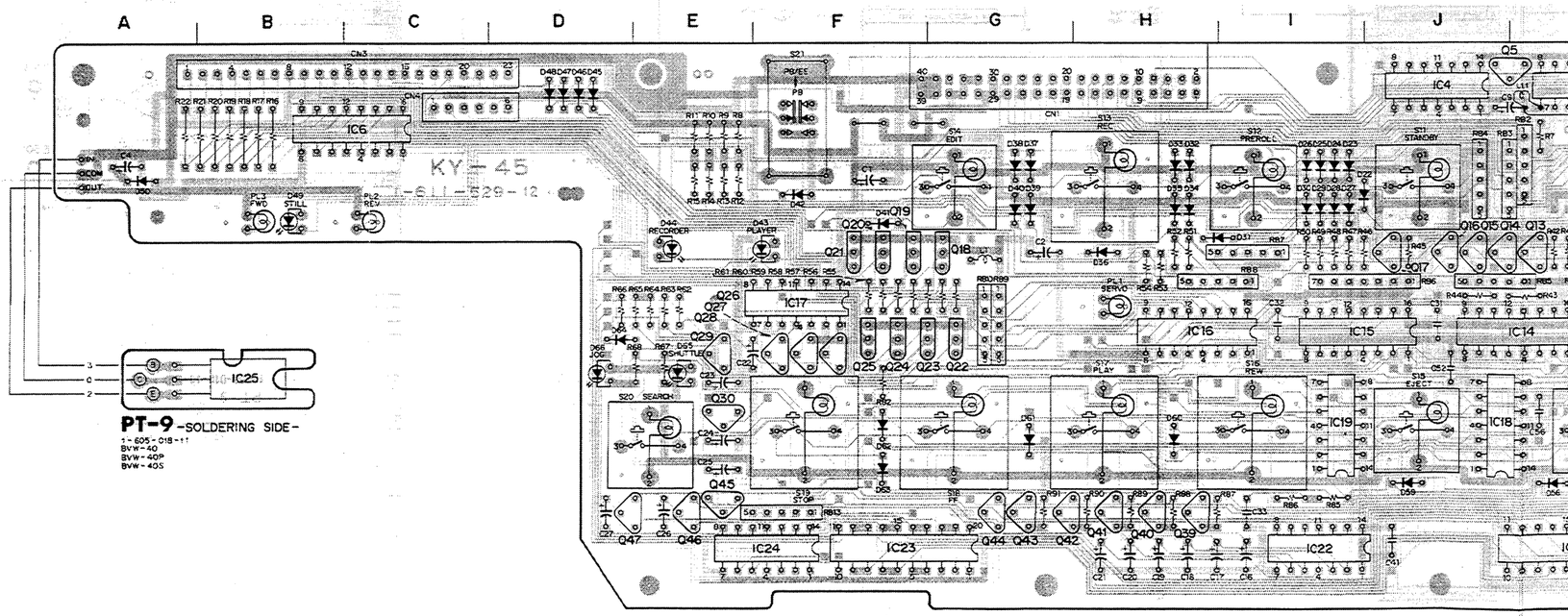


KY-45 (KEY PANEL/TIME COUNTER DISPLAY)
KY-47
DP-31
PT-9



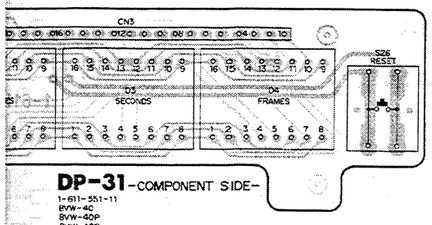
DP-31 –COMPONENT SIDE–
1-617-551-11
BVW-40
BVW-40P
BVW-40S

PT-9 –SOLDERING SIDE–
1-605-018-11
BVW-40
BVW-40P
BVW-40S

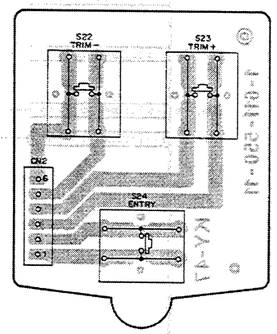


CN1	G – 1	D45	D – 1	Q1	O – 1	RB1	O – 1
CN2	L – 2	D46	D – 1	Q2	O – 1	RB2	K – 1
CN3	C – 1	D47	D – 1	Q3	N – 1	RB3	J – 1
CN4	C – 1	D48	D – 1	Q4	N – 1	RB4	J – 1
		D49	B – 2	Q5	J – 1	RB5	J – 2
D1	P – 1	D50	A – 1	Q6	P – 2	RB6	J – 2
D2	O – 2	D51	L – 2	Q7	P – 2	RB7	I – 2
D3	N – 2	D52	L – 2	Q8	P – 2	RB8	I – 2
D4	N – 1	D53	L – 3	Q9	P – 3	RB9	G – 2
D5	M – 1	D54	O – 3	Q10	O – 3	RB10	G – 2
D6	L – 1	D55	N – 3	Q11	N – 3	RB11	N – 4
D7	K – 1	D56	M – 3	Q12	M – 3	RB12	M – 4
D8	L – 1	D57	L – 4	Q13	K – 2	RB13	F – 4
D9	K – 1	D58	K – 4	Q14	J – 2		
D10	K – 1	D59	J – 4	Q15	J – 2	S1	P – 1
D11	K – 1	D60	H – 3	Q16	J – 2	S2	O – 1
D12	K – 1	D61	G – 3	Q17	J – 2	S3	N – 1
D13	K – 1	D62	F – 3	Q18	G – 2	S4	N – 1
D14	K – 1	D63	F – 4	Q19	F – 2	S5	M – 1
D15	L – 2	D64	D – 3	Q20	F – 2	S6	P – 3
D16	K – 2	D65	E – 3	Q21	F – 2	S7	N – 3
D17	K – 2	D66	D – 3	Q22	G – 3	S8	M – 3
D18	K – 2			Q23	G – 3	S9	L – 3
D19	K – 2	IC1	N – 1	Q24	F – 3	S10	K – 3
D20	K – 2	IC2	L – 1	Q25	F – 3	S11	J – 1
D21	K – 2	IC3	K – 1	Q26	F – 3	S12	I – 1
D22	I – 2	IC4	J – 1	Q27	F – 3	S13	H – 1
D23	I – 1	IC5	L – 2	Q28	F – 3	S14	G – 1
D24	I – 1	IC6	C – 1	Q29	E – 3	S15	J – 3
D25	I – 1	IC7	O – 2	Q30	E – 3	S16	I – 3
D26	I – 1	IC8	N – 2	Q31	O – 4	S17	H – 3
D27	I – 2	IC9	M – 2	Q32	O – 4	S18	G – 3
D28	I – 2	IC10	O – 3	Q33	O – 4	S19	F – 3
D29	I – 2	IC11	N – 3	Q34	O – 4	S20	E – 3
D30	I – 2	IC12	L – 3	Q35	N – 4	S21	F – 1
D31	I – 2	IC13	K – 3	Q36	N – 4		
D32	H – 1	IC14	K – 3	Q37	N – 4	TP1	L – 3
D33	H – 1	IC15	I – 3	Q38	N – 4	TP2	L – 4
D34	H – 2	IC16	H – 3	Q39	H – 4	TP3	L – 3
D35	H – 2	IC17	F – 2	Q40	H – 4	TP4	L – 3
D36	H – 2	IC18	J – 3	Q41	H – 4	TP5	L – 3
D37	G – 1	IC19	I – 3	Q42	G – 4	TPE	O – 1
D38	G – 1	IC20	L – 4	Q43	G – 4	TPV	O – 1
D39	G – 2	IC21	K – 4	Q44	G – 4		
D40	G – 2	IC22	I – 4	Q45	E – 4		
D41	F – 2	IC23	F – 4	Q46	E – 4		
D42	F – 2	IC24	F – 4	Q47	D – 4		
D43	F – 2	IC25	A – 1				
D44	E – 2						

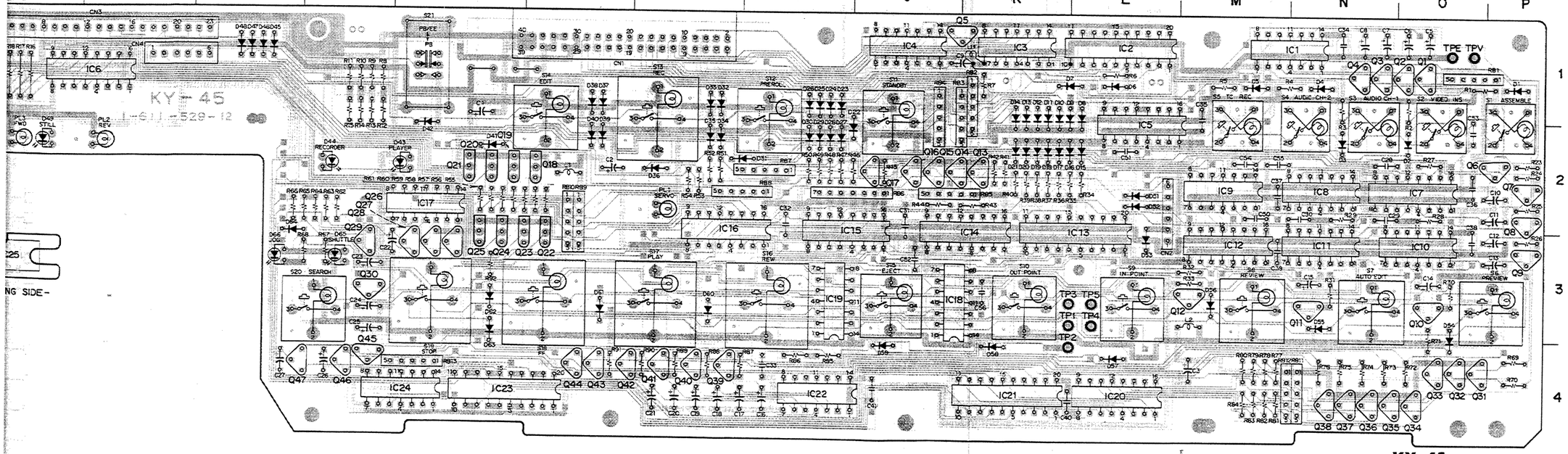
KY-45, KY-47, DP-31, PT-9



DP-31-COMPONENT SIDE-
1-611-551-11
8VW-40
8VW-40P
8VW-40S



KY-47-COMPONENT SIDE-
1-611-550-11
8VW-40
8VW-40P
8VW-40S

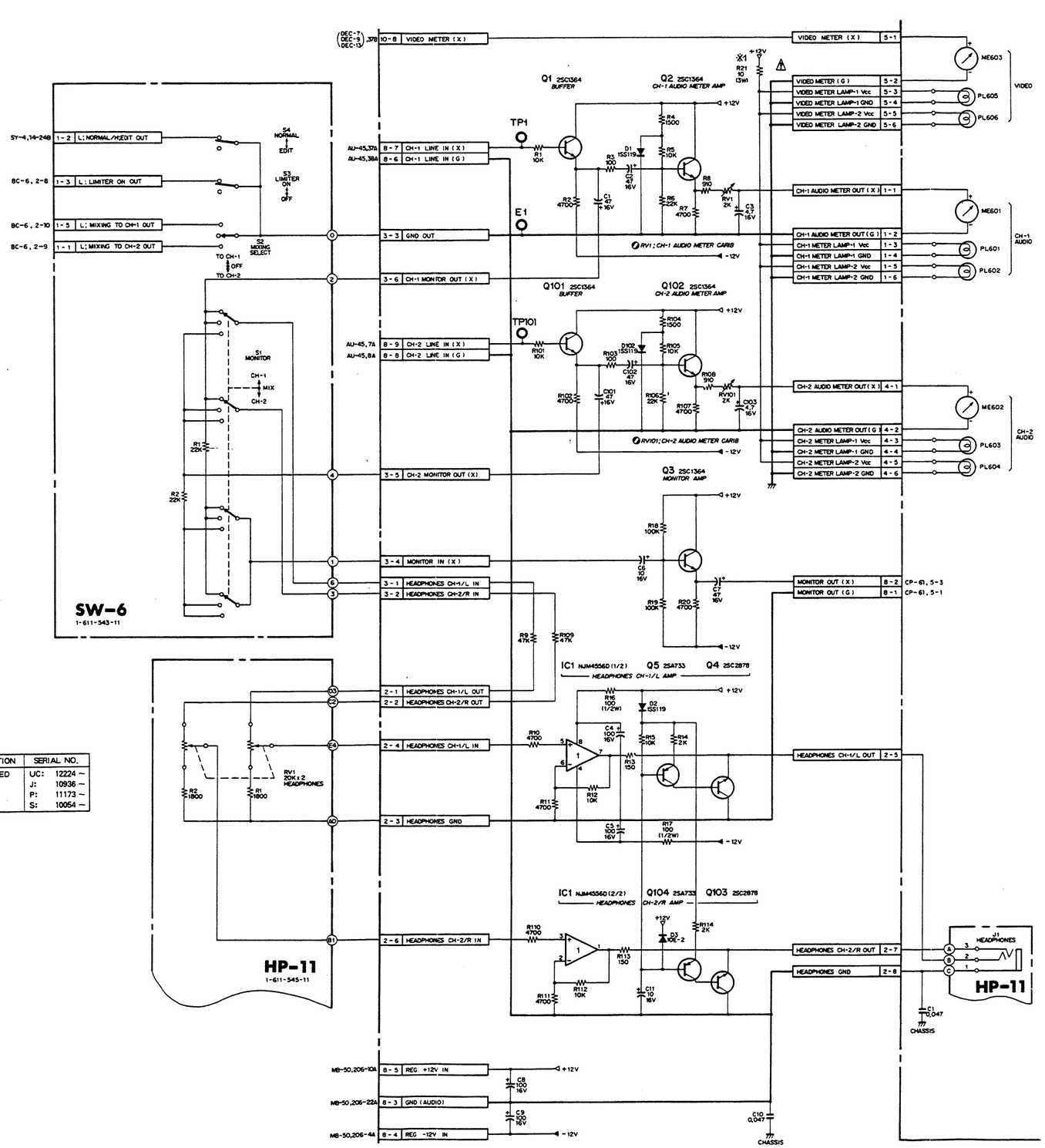


KY-45 -SOLDERING SIDE-
1-611-529-12
8VW-40
8VW-40P
8VW-40S

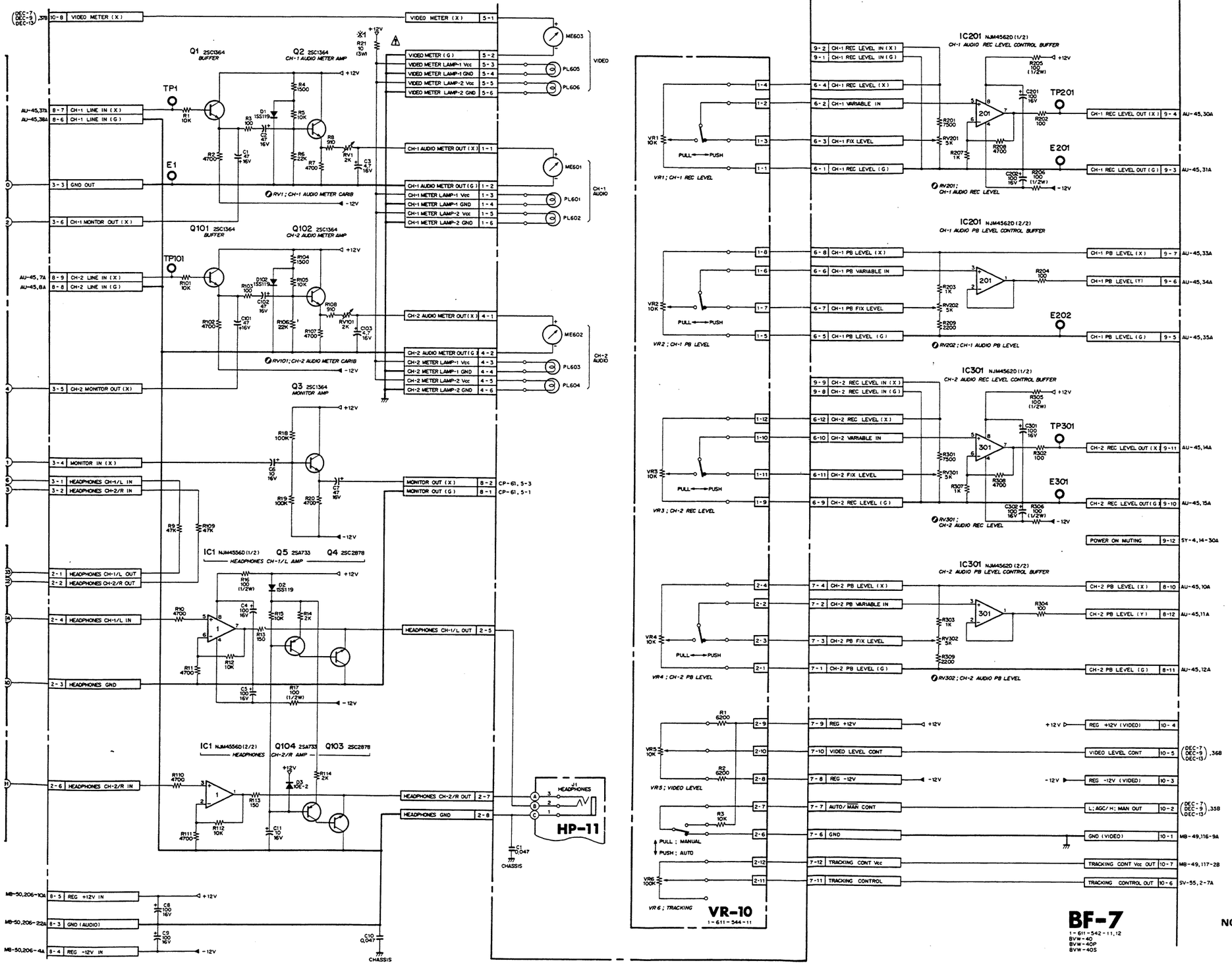
BF-7 (FRONT PANEL)
HP-11
SW-6
VR-10

NOTE:

MARK	CHANGE INFORMATION	SERIAL NO.
※1	R21 10 (3W) ADDED	UC: 12224 ~ J: 10936 ~ P: 11173 ~ S: 10054 ~



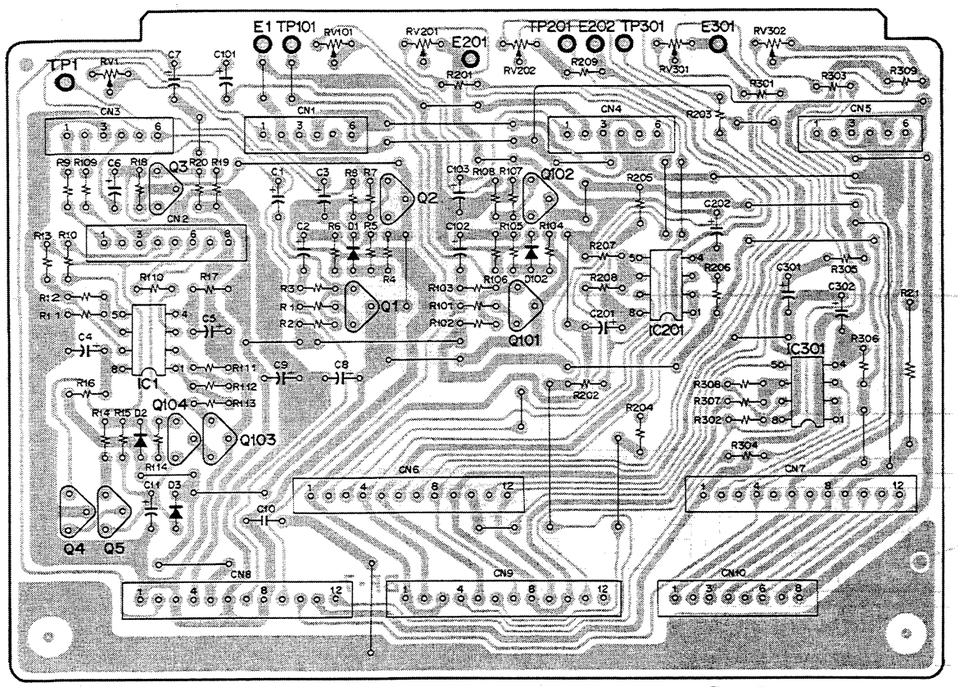
BF-7, HP-11, SW-6, VR-10



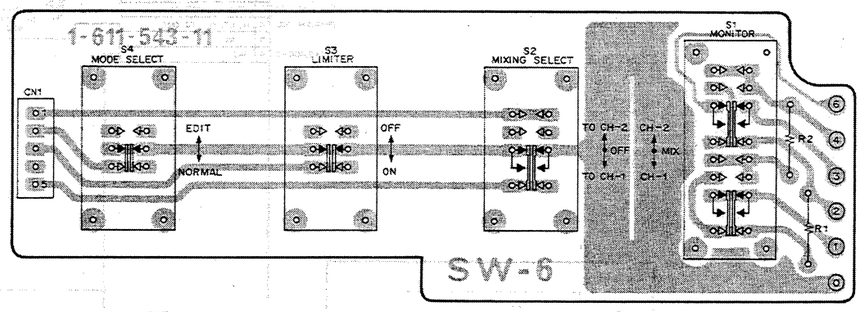
NOTE: The shaded and ⚠-marked components are critical to safety.
Replace only with same components as specified.

BF-7, HP-11, SW-6, VR-10

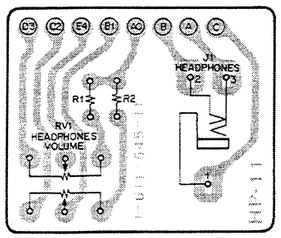
BF-7 (FRONT PANEL)
HP-11
SW-6
VR-10



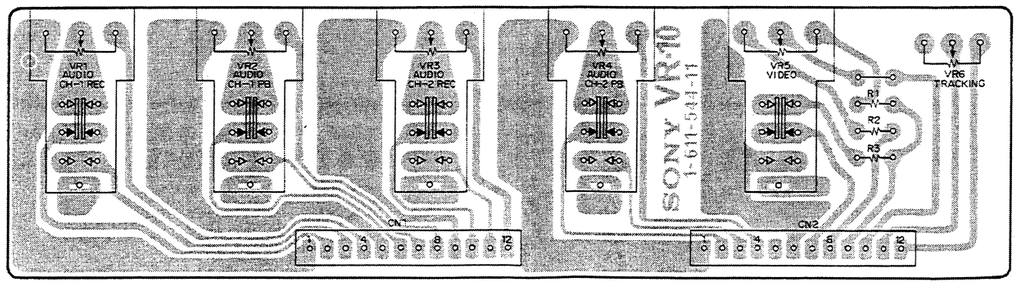
BF-7 – COMPONENT SIDE –
1-611-542-12
BVW-40
BVW-40P
BVW-40S



SW-6 – SOLDERING SIDE –
1-611-543-11
BVW-40
BVW-40P
BVW-40S

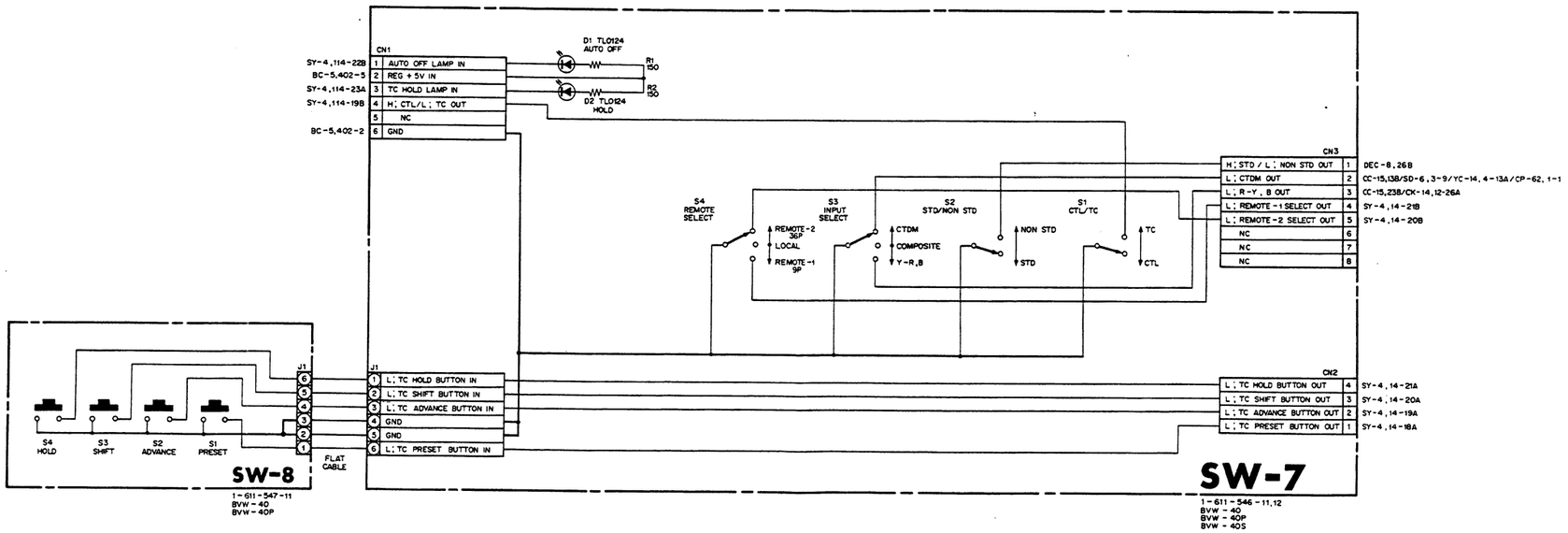


HP-11 – SOLDERING SIDE –
1-611-545-11
BVW-40
BVW-40P
BVW-40S

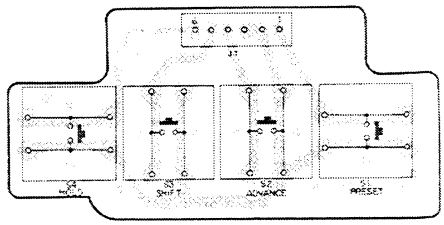


VR-10 – SOLDERING SIDE –
1-611-544-11
BVW-40
BVW-40P
BVW-40S

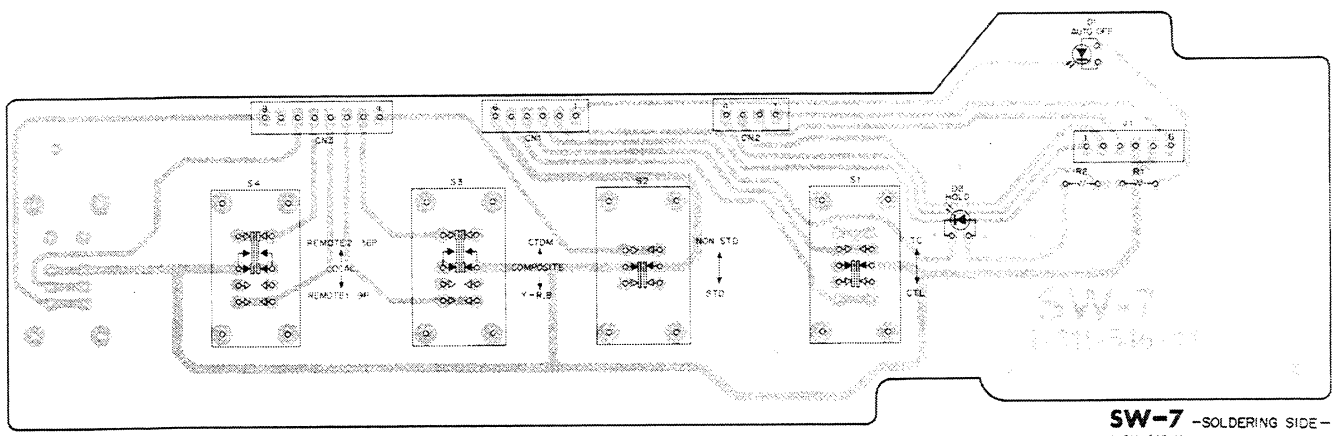
SW-7 (FRONT PANEL)
SW-8



SW-7 (FRONT PANEL)
SW-8

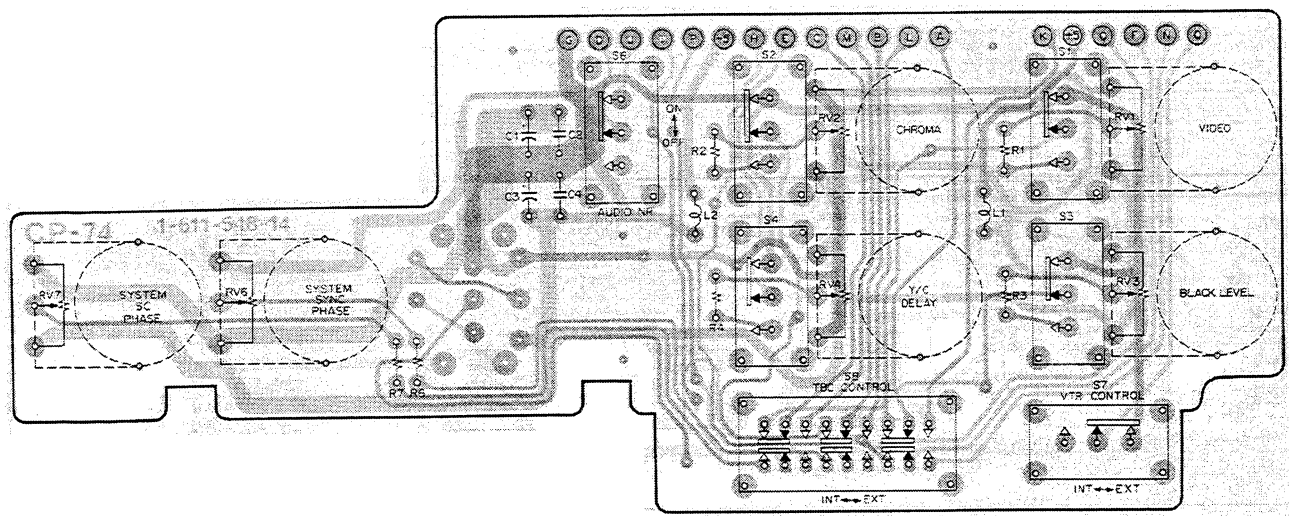


SW-8 –SOLDERING SIDE–



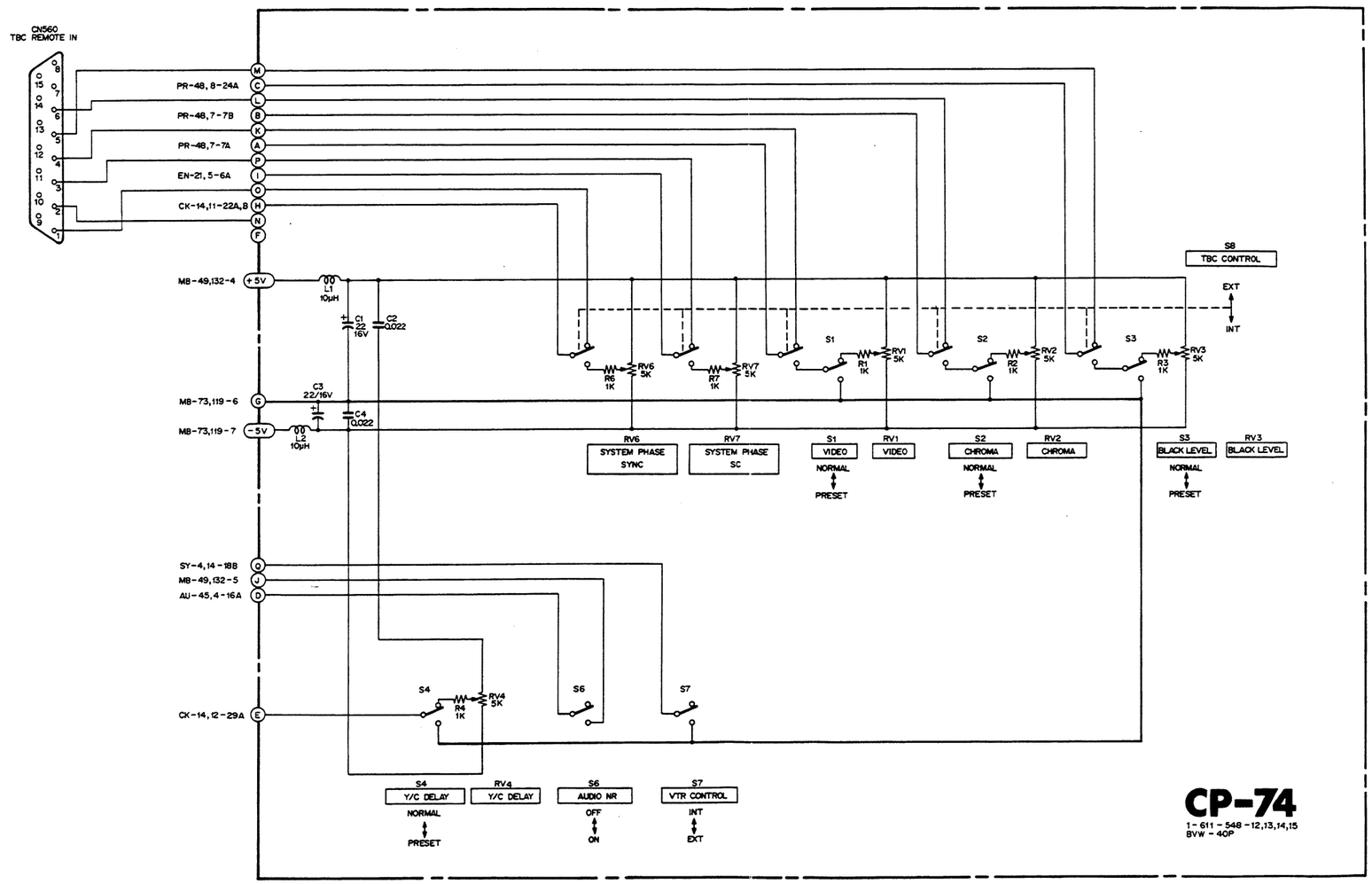
SW-7 –SOLDERING SIDE–

CP-74 (TBC CONTROL PANEL)

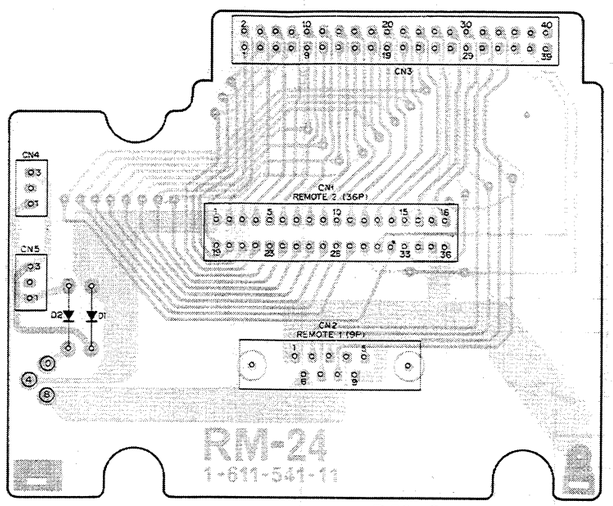


CP-74 –SOLDERING SIDE–
1-611-548-12, 13, 14, 15
8VW-40P

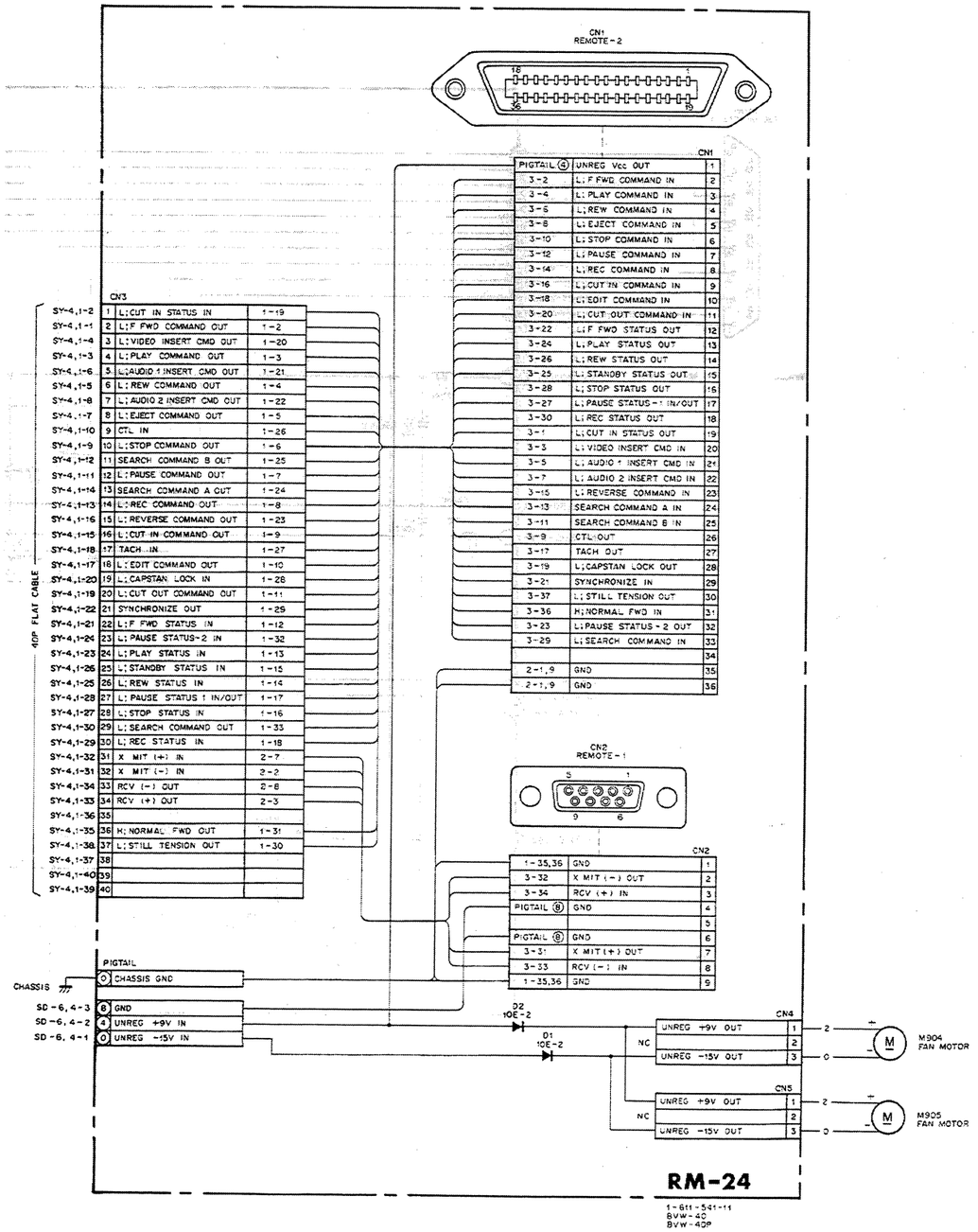
CP-74 (TBC CONTROL PANEL)



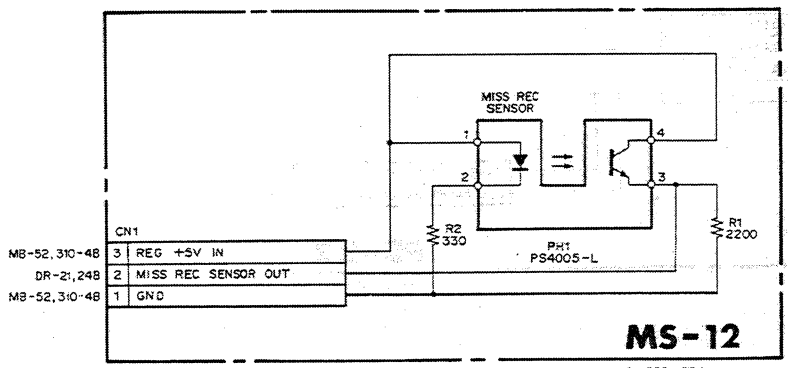
RM-24 (REMOTE CONNECTOR PANEL)

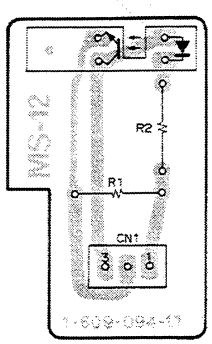


RM-24 -SOLDERING SIDE-
1-611-541-11
BVW-40
BVW-40P



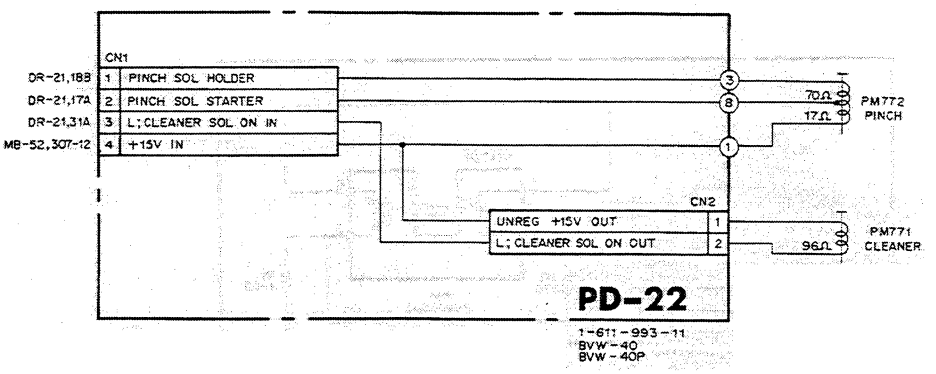
MS-12

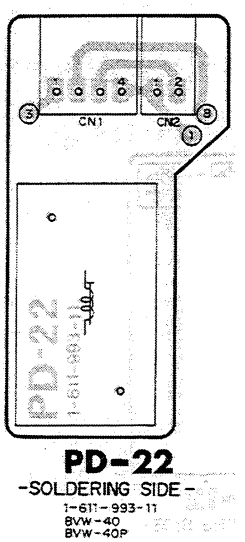




MS-12
-SOLDERING SIDE-
1-609-094-11
BVW-40
BVW-40P

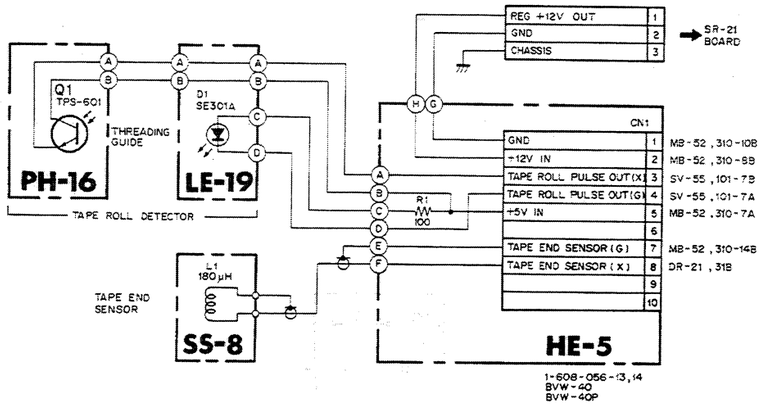
PD-22

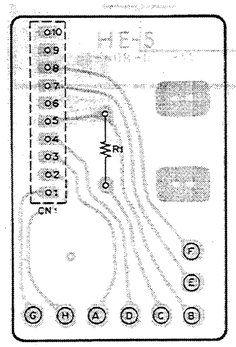

CN1
DR-21,18B
1 PINCH SOL HOLDER
DR-21,17A
2 PINCH SOL STARTER
DR-21,31A
3 L; CLEANER SOL ON IN
MB-52,307-12
4 +15V IN
3
8
1
70Ω
17Ω
PM772
PINCH
CN2
UNREG +15V OUT 1
L; CLEANER SOL ON OUT 2
96Ω
PM771
CLEANER
PD-22
1-611-993-11
BVW-40
BVW-40P


CN1
CN2
3
8
1
PD-22
1-611-993-11
PD-22
-SOLDERING SIDE-
1-611-993-11
BVW-40
BVW-40P

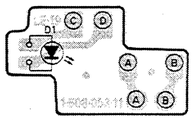
HE-5, LE-19, PH-16, SS-8

HE-5
LE-19
PH-16
SS-8

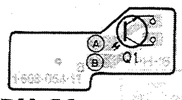




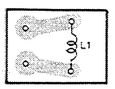
HE-5 -SOLDERING SIDE-
1-608-056-14
BVW-40
BVW-40P



LE-19 -SOLDERING SIDE-
1-608-053-12
BVW-40
BVW-40P

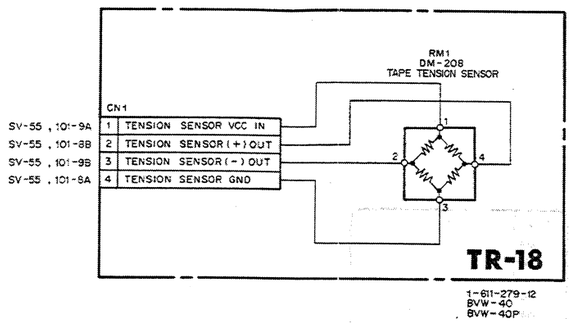


PH-16 -SOLDERING SIDE-
1-608-054-13
BVW-40
BVW-40P

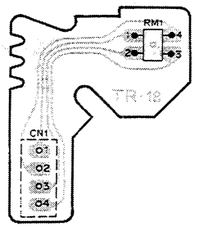


SS-8 -SOLDERING SIDE-
1-586-946-12
BVW-40
BVW-40P

TR-18



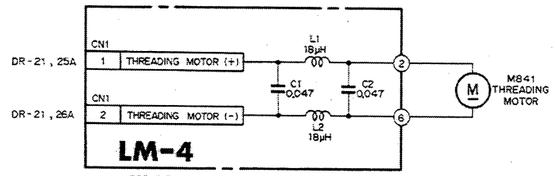
1-611-279-12
BVW-40
BVW-40P



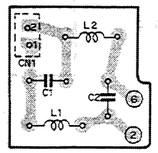
TR-18
-SOLDERING SIDE-

1-611-279-12
BVW-40
BVW-40P

LM-4



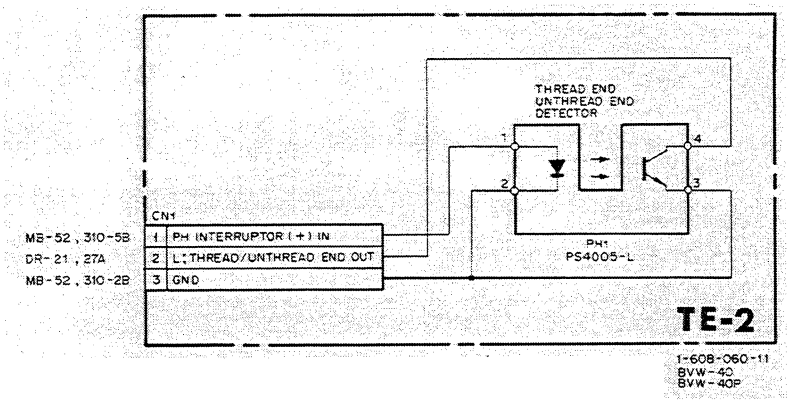
1-585-913-11
BVW-40
BVW-40P

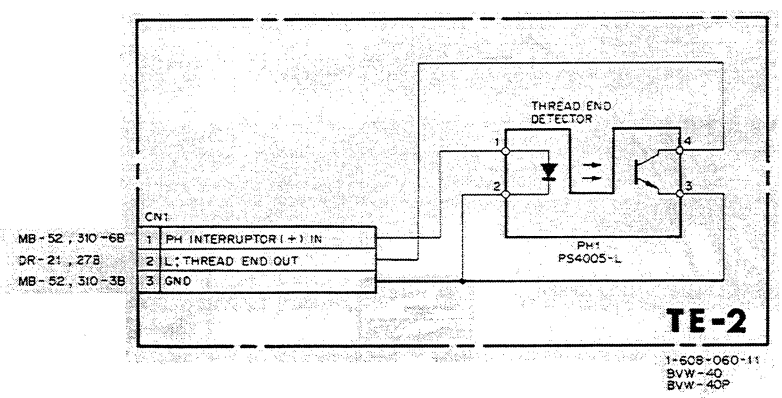


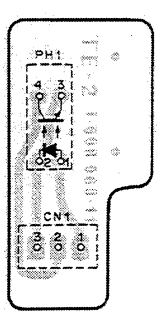
LM-4 -SOLDERING SIDE-

1-585-913-11
BVW-40
BVW-40P

TE-2

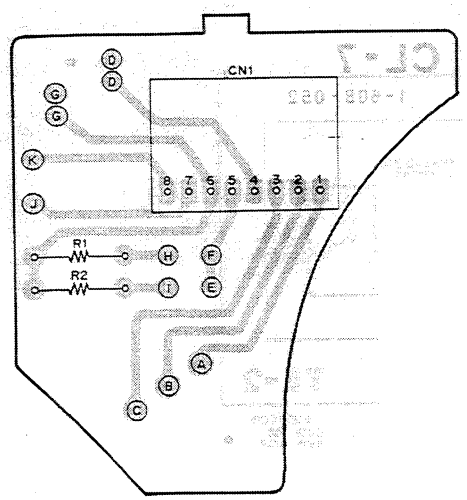




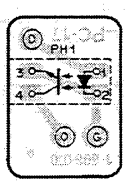


TE-2
-SOLDERING SIDE-
1-608-060-11
BVW-40
BVW-40P

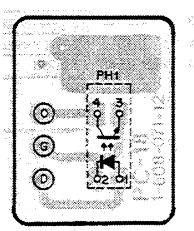
CL-7 (CASSETTE UP COMPARTMENT)
PC-17
PC-18



CL-7 -COMPONENT SIDE-
1-608-052-13
BVW-40
BVW-40P

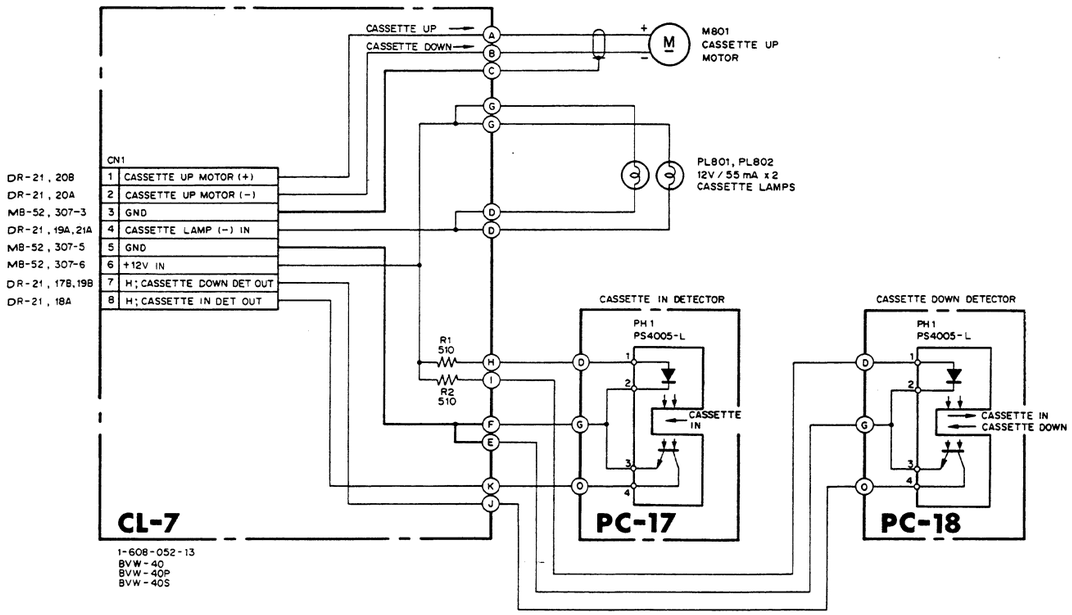


PC-17
-SOLDERING SIDI
1-608-070-13
BVW-40
BVW-40P

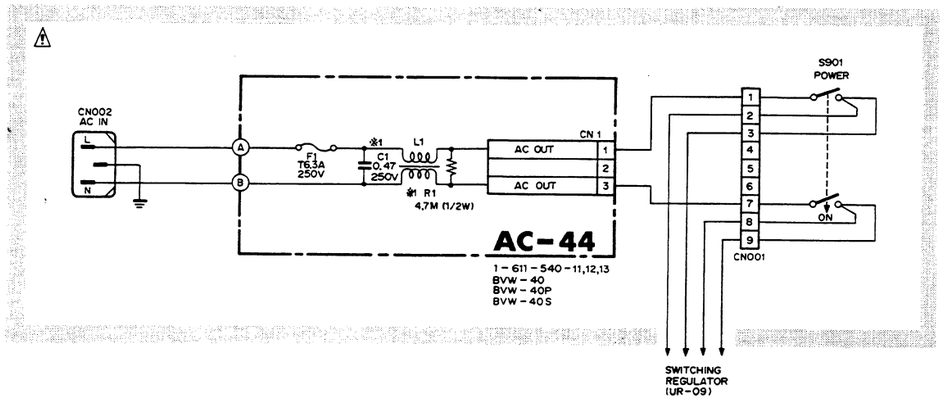


PC-18
- SOLDERING SIDE -
1-608-071-12
BVW-40
BVW-40P

CL-7 (CASSETTE UP COMPARTMENT)
PC-17
PC-18

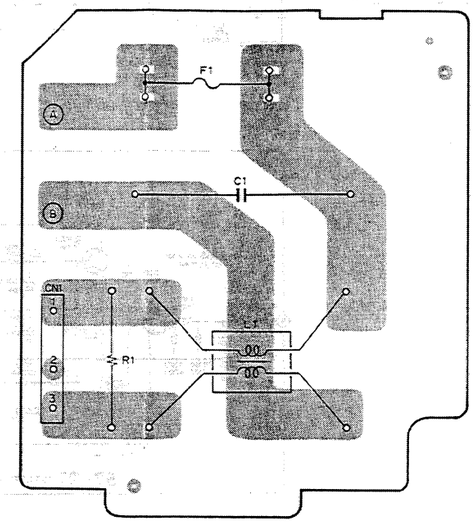


AC-44 (POWER)



NOTE:

MARK	CHANGE INFORMATION		SERIAL NO.
※1	C1	0.01 → 0.47	UC: 12224 ~
	R1	4.7M (1/2W) ADDED	J: 10936 ~
			P: 11273 ~
			S: 10059 ~



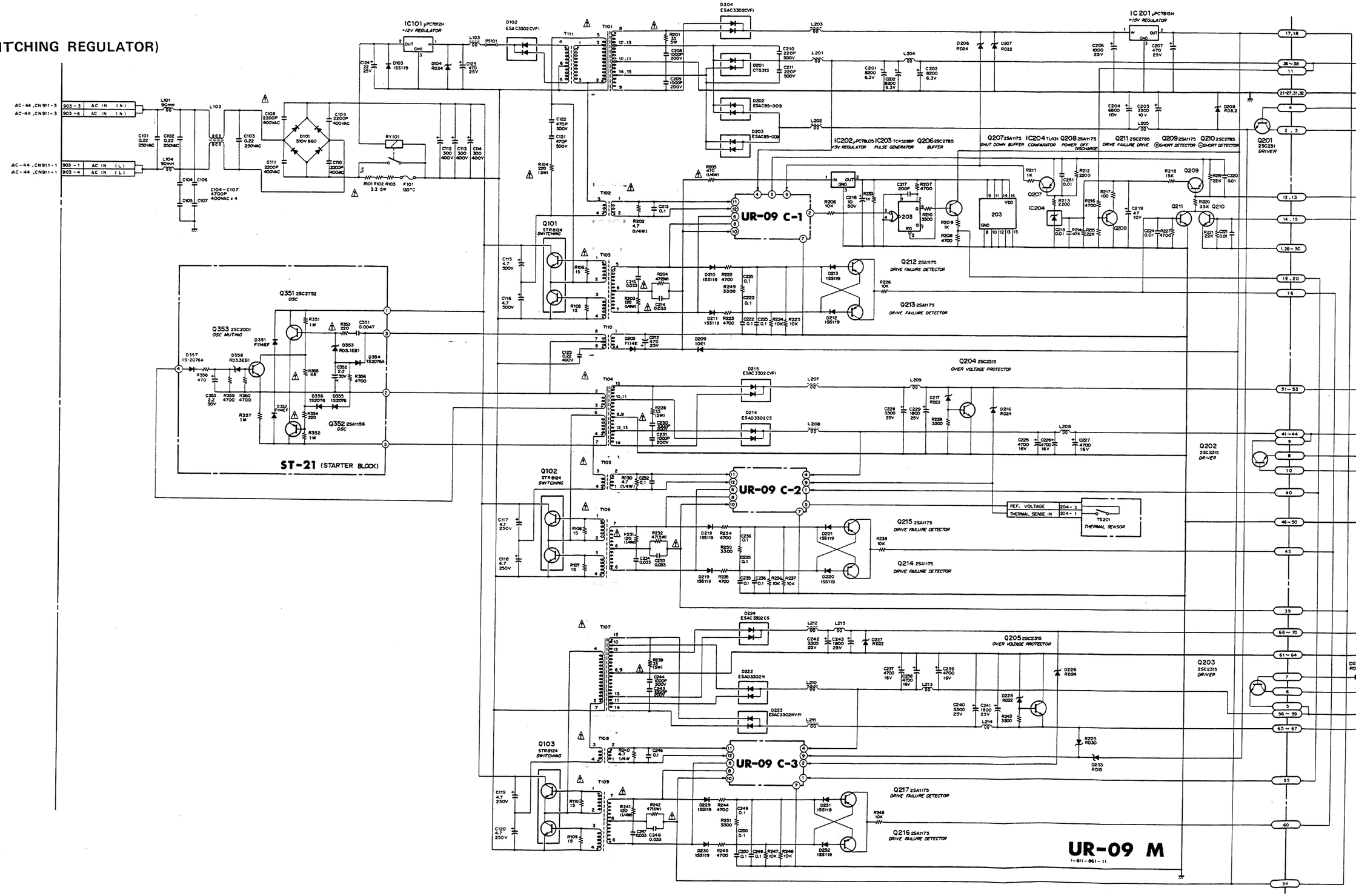
AC-44 –SOLDERING SIDE–

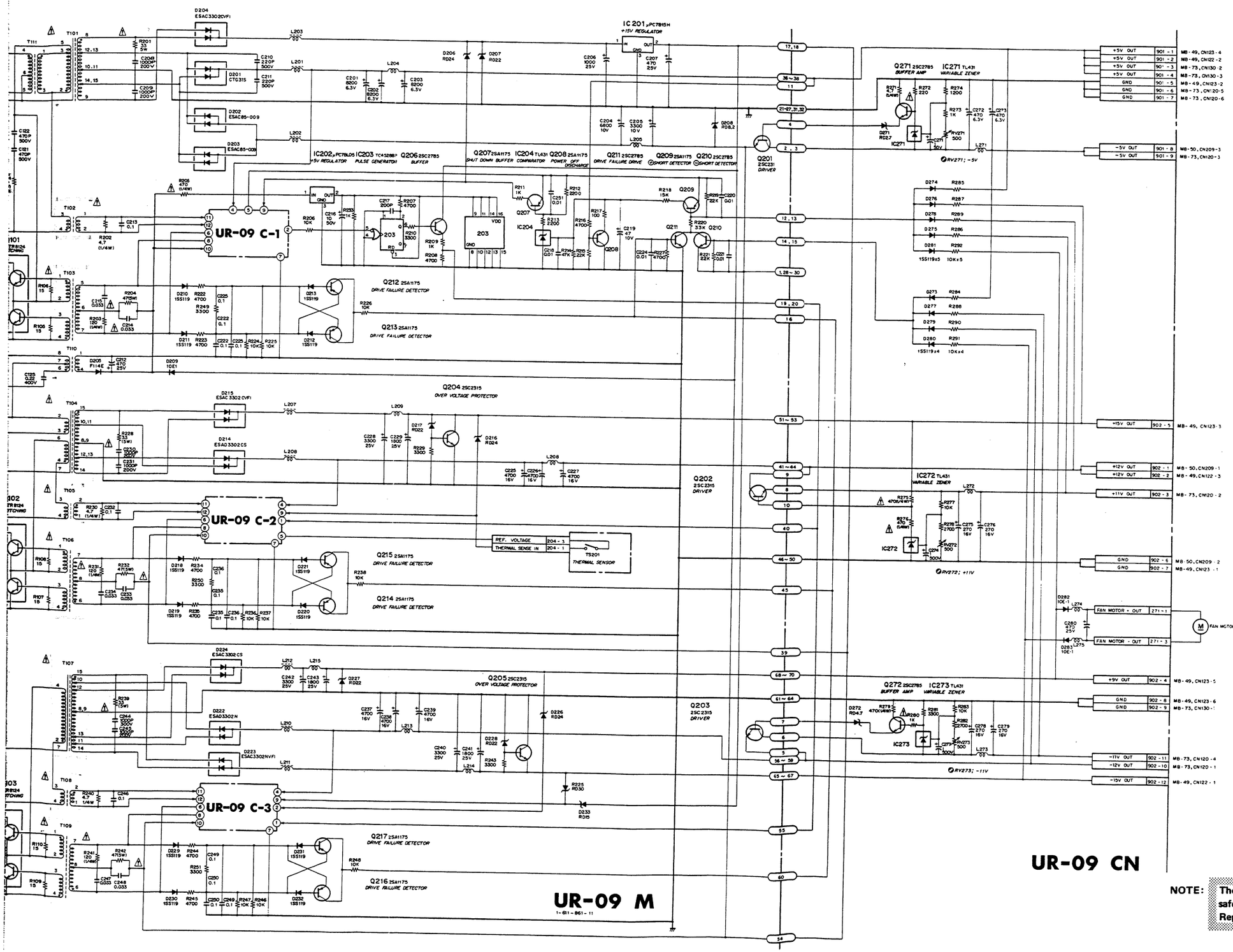
1-611-540-13
BVW-40
BVW-40P
BVW-40S

NOTE: **The shaded and ⚠ -marked components are critical to safety.**
Replace only with same components as specified.

UR-09 (SWITCHING REGULATOR)

CN
M
ST-21

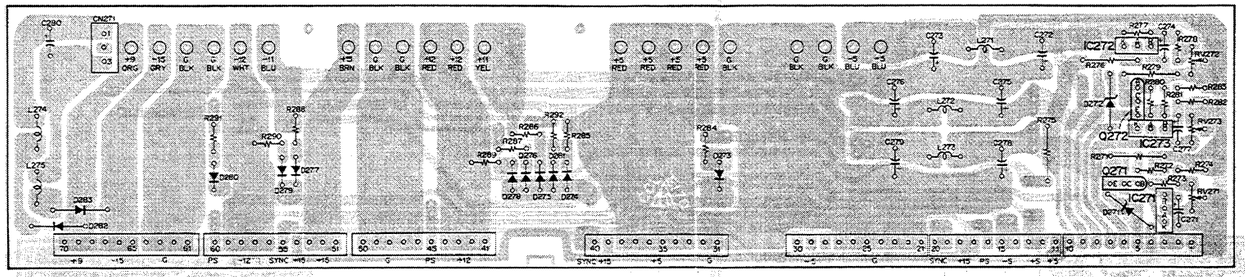




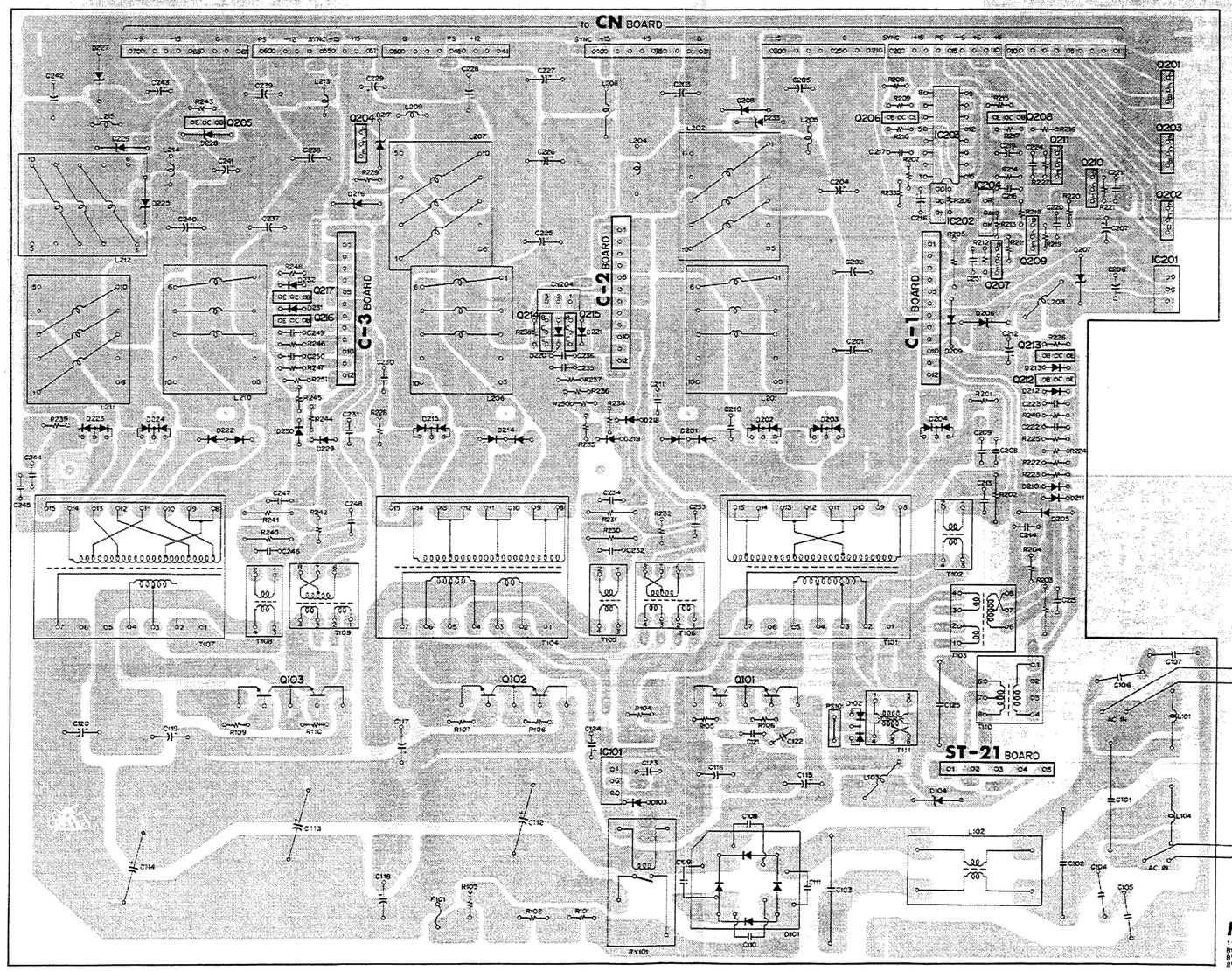
NOTE: The shaded and ⚠ -marked components are critical to safety.
Replace only with same components as specified.

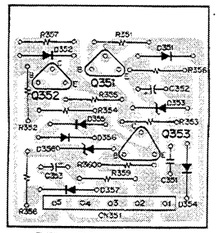
UR-09 (CN, M, ST-21)

UR-09 (SWITCHING REGULATOR)
CN
M
ST-21



CN -SOLDERING SIDE-
1-611-862-11
BVW-40
BVW-40P
BVW-40S





ST-21-SOLDERING SIDE-
1-607-595-13
BVW-40
BVW-40P
BVW-40S

M -SOLDERING SIDE-
1-611-861-11
BVW-40
BVW-40P
BVW-40S

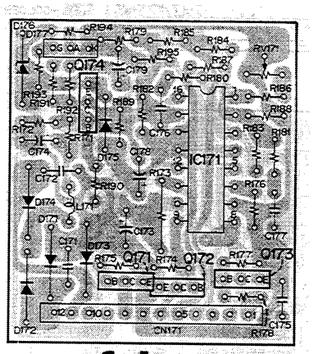
UR-09 (C1, C2, C3)

UR-09 (SWITCHING REGULATOR)

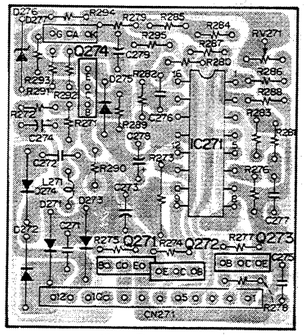
C1

C2

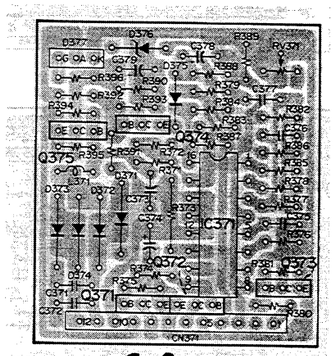
C3



C-1 –SOLDERING SIDE–
1-611-863-11
BVW-40
BVW-40P
BVW-40S



C-2 –SOLDERING SIDE–
1-611-864-11
BVW-40
BVW-40P
BVW-40S



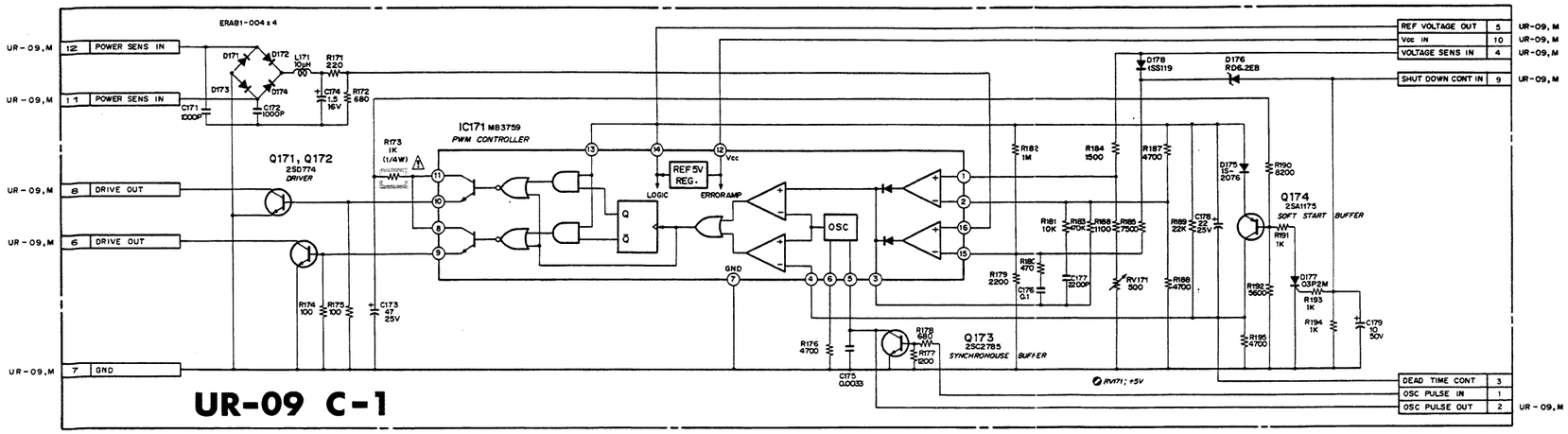
C-3 –SOLDERING SIDE–
1-611-865-11
BVW-40
BVW-40P
BVW-40S

UR-09 (SWITCHING REGULATOR)

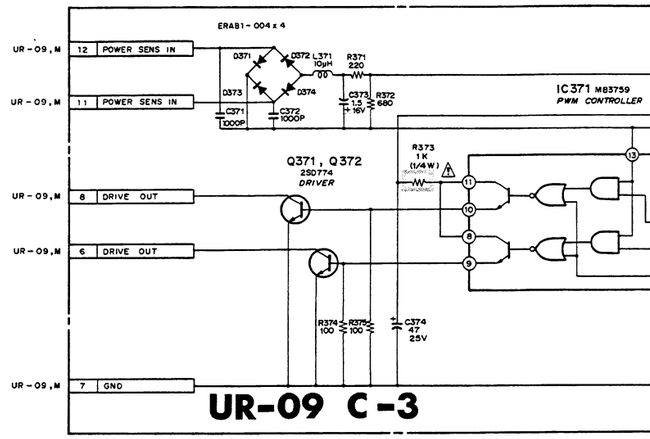
C1

C2

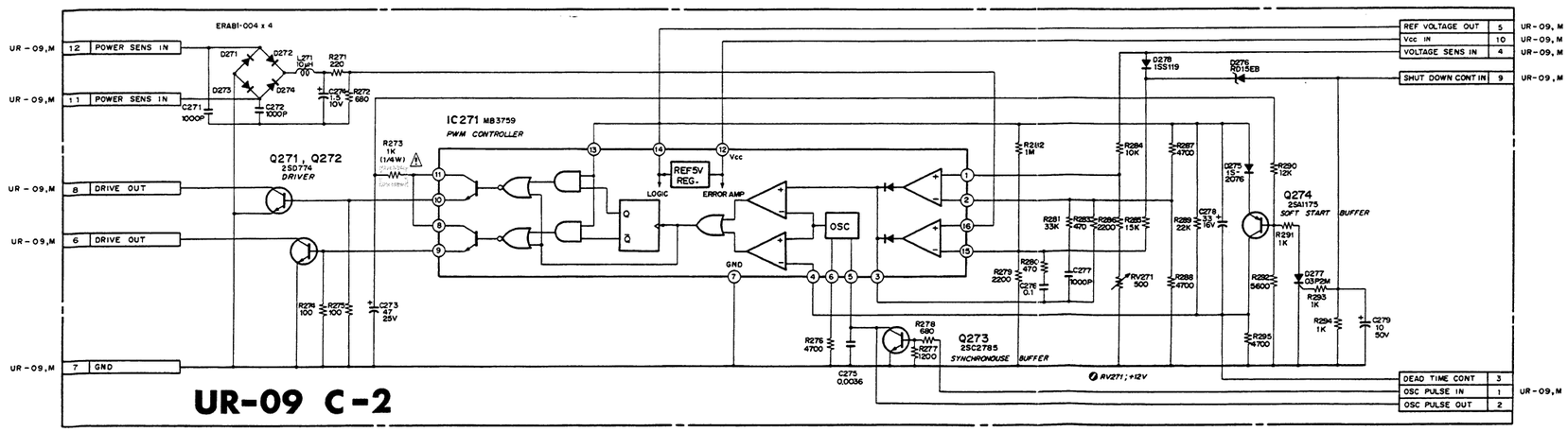
C3



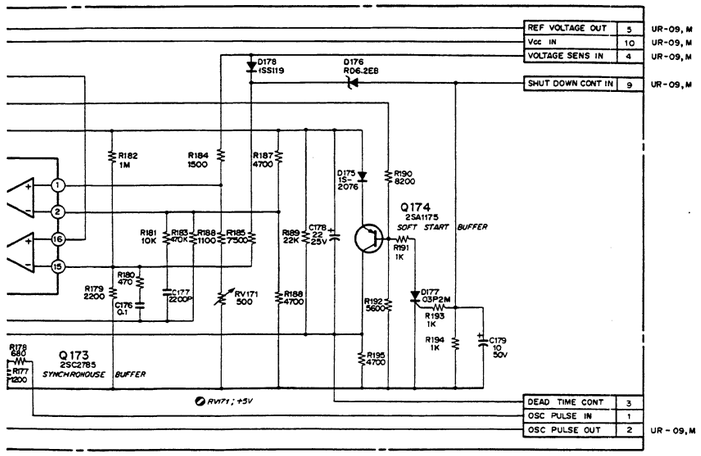
UR-09 C-1

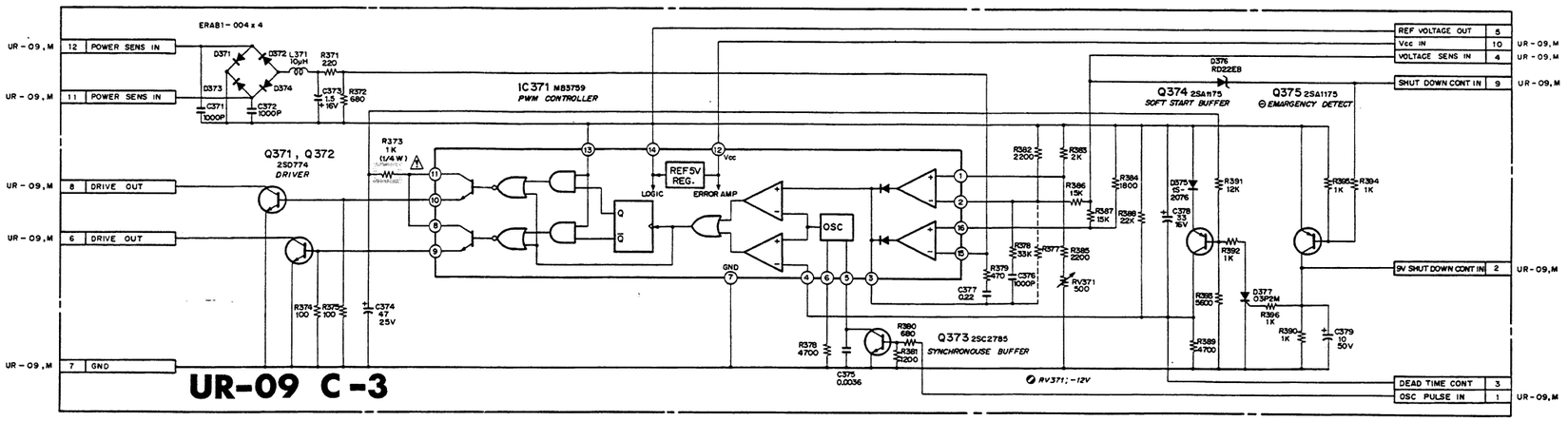


UR-09 C-3

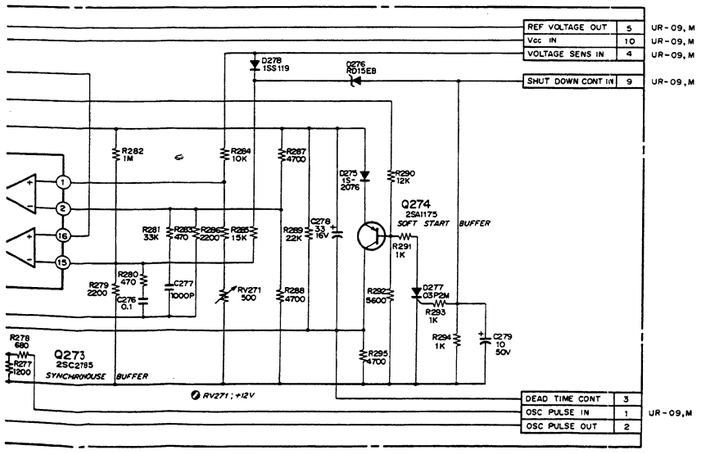


UR-09 C-2





UR-09 C-3



NOTE: **The shaded and ⚠-marked components are critical to safety.**
Replace only with same components as specified.

MB-50 MB-50

MB-50 (MOTHER BOARD)

CC-15

CN201

A			B	
GND		1	GND	
		2		
REG +12V IN	+12V	3	REG +12V IN	+12V
REG +5V IN	+5V	4	REG +5V IN	+5V
		5		
203-6A,202-6A		6		203-6B,203-6B
203-7A,202-7A		7		203-7B,203-7B
		8		
GND		9	GND	
210-14B DUB B-Y/C DO IN(G)		10	DUB R-Y/B-Y IN(X)	210-13A
210-14A DUB B-Y/C DO IN(X)		11	DUB R-Y/B-Y IN(G)	210-13B
GND		12		
210-15B DUB R-Y/Y DO IN(G)		13	L:CTDM IN	206-5A,217-3
210-15A DUB R-Y/Y DO IN(X)		14		
GND		15		
		16		
		17	C-C SYNC OUT(G)	217-2
		18	C-C SYNC OUT(X)	217-1
		19		
		20		
		21		
203-22A,202-22A		22		202-22B,203-22B
GND		23	L:Y-R,B IN	210-10B,206-6A, 219-3
216-10 R-Y/B-Y OUT(G)		24		
216-9 R-Y/B-Y OUT(X)		25	GND	
GND		26	DUB Y IN(X)	210-12A
216-8 Y OUT(G)		27	DUB Y IN(G)	210-12B
216-7 Y OUT(X)		28	GND	
GND		29	DECODE Y IN(X)	202-29A
GND		30	DECODE Y IN(G)	202-30A
216-4 Y DO OUT(G)		31	GND	
216-3 Y DO OUT(X)		32	GND	
GND		33	DECODE B-Y IN(X)	202-33A
216-2 C DO OUT(G)		34	DECODE B-Y IN(G)	202-34A
216-1 C DO OUT(X)		35	GND	
GND		36	DECODE R-Y IN(X)	202-36A
		37	DECODE R-Y IN(G)	202-37A
		38		
		39		
REG -5V IN	-5V	40	REG -5V IN	-5V
REG -12V IN	-12V	41	REG -12V IN	-12V
		42		
GND		43	GND	

CN206

MB-52,310-11A	1A	EXT TC IN(Y)	208-2
MB-52,310-13A	2A	EXT TC IN(G)	208-3
MB-52,310-8A	3A	TC OUT to EXT(Y)	208-5
SW-7,623-4	4A	REGCTDM IN	206
SW-7,623-3	5A	REGCTDM IN	201-13B,206-5B,217-3
SW-7,623-2	6A	L:Y-R,B IN	201-23B,210-10B,219-3
MB-49,116-13B	7A	RF METER IN	203-34B
BF-7,610-5	8A	VIDEO LEVEL CONT IN	203-36B
	9A		
BF-7,608-5	10A	REG +12V OUT	+12V
BF-7,609-11	11A	AUDIO MONITOR IN(G)	210-6B
BF-7,608-8	12A	AUDIO MONITOR IN(X)	210-6A
BF-7,609-11	13A	AUDIO CH-1 OUT(G)	210-4B
BF-7,608-12	14A	CH-2 PB VR IN/OUT(Y)	204-8A,210-2A
BF-7,608-11	15A	CH-2 REC/EE VR IN(X)	204-11A
BF-7,609-4	17A	CH-1 REC/EE VR IN(X)	204-14A
BF-7,609-7	18A	CH-1 PB VR IN/OUT(X)	204-10A
BF-7,609-9	19A	CH-1 PB VR IN/OUT(G)	204-13A
BF-7,608-7	20A	CH-1 LINE OUT(X)	204-37A,210-1B
BF-7,609-12	21A	L:AUDIO MUTE OUT	204-39B,205-39B,213-6, 206-23B
BF-7,608-3	22A	GND	
MB-49,117-14A	23A	L:BIAS OSC ON IN	205-6B
SW-6,631-3	24A	L:LIMITER ON IN	213-8
SW-6,631-5	25A	L:MIXING TO CH-1 IN	213-10
BF-7,610-8	9B	VIDEO/RF METER OUT	203-37B
MB-52,310-11A	2B	TC OUT to EXT(G)	208-6
MB-52,310-10A	3B	TC OUT to EXT(X)	208-4
MB-52,310-22B	4B	1st FIELD PULSE OUT	202-32B
MB-49,117-12A	5B	L:CTDM OUT	201-13B,206-5A,217-3
SW-7,623-1	6B	H:STD/L:NON STD IN	202-26B,210-10A,11A
BF-7,610-2	7B	L:AGC/H:MANUAL IN	203-35B
BF-7,610-8	9B	VIDEO/RF METER OUT	203-37B
MB-52,310-11A	2B	TC OUT to EXT(G)	208-6
MB-52,310-10A	3B	TC OUT to EXT(X)	208-4
MB-52,310-22B	4B	1st FIELD PULSE OUT	202-32B
MB-49,117-12A	5B	L:CTDM OUT	201-13B,206-5A,217-3
BF-7,608-10	13B	CH-2 PB VR IN/OUT(X)	204-10A
BF-7,609-10	17B	CH-2 PB VR IN/OUT(G)	204-13A
BF-7,609-10	17B	CH-2 REC/EE VR IN(G)	204-15A
BF-7,609-3	18B	CH-1 REC/EE VR IN(G)	204-11A
BF-7,609-6	19B	CH-1 PB VR IN/OUT(Y)	204-34A
BF-7,608-6	20B	CH-1 LINE OUT(G)	204-38A,210-3A
MB-49,116-19A	21B	L:AUDIO NR ON IN	204-16A
	22B	GND	206-21B
MB-49,117-15B	23B	L:AUDIO MUTE IN	206-21A,204-39B,205-39B,
MB-49,116-12B	24B	L:MIXING TO OUT	206-23A,213-6
SW-6,631-1	25B	L:MIXING TO CH-2 IN	213-9

CN207

MB-49,124-3	1	REG +12V IN
MB-49,124-2	2	REG +5V IN
MB-49,124-1	3	REG -5V OUT

CN208

CN PANEL,566-2	1	EXT TC IN (X)	206-1B
CN PANEL,566-3	2	EXT TC IN (Y)	206-1A
CN PANEL,567-2	3	EXT TC IN (G)	206-2A
CN PANEL,567-3	4	TC OUT to EXT(X)	206-3B
CN PANEL,567-1	5	TC OUT to EXT(Y)	206-3A
	6	TC OUT to EXT(G)	206-2B

CN209

UR-09,902-4	1	REG +12V IN
UR-09,902-5	2	GND
UR-09,902-6	3	REG -5V IN

CN210

CP-61,522-7	1A	GND	204-8A,206-14A
CP-61,526-1	2A	CH-2 LINE OUT(G)	204-6A,206-20B
CP-61,522-3	3A	CH-2 LINE OUT(X)	206-13B
CP-61,522-4	4A	AUDIO CH-1 OUT(X)	206-12B
CP-61,522-5	5A	AUDIO CH-2 OUT(X)	
CP-61,522-6	6A	REG -12V OUT	
	7A	GND	
CP-62,541-5	8A	REG +12V	
	9A	VIDEO IN (LINE)(G)	203-9A,219-1
	10A	H:STD/L:NON STD OUT	202-6B,202-26B
	11A	H:STD/L:NON STD IN	202-6B,202-26B
CN PANEL,557-7	12A	DUB Y IN(X)	201-10B
CN PANEL,557-5	13A	DUB R-Y/B-Y IN(X)	201-11A
CN PANEL,557-4	14A	DUB B-Y/C DO IN(X)	201-14A
CN PANEL,557-3	15A	DUB R-Y/Y DO IN(X)	
CP-61,528-4	1B	GND	204-7A,206-14B
CP-61,527-2	2B	CH-1 LINE OUT(G)	204-17A,206-20A
CP-61,527-3	3B	CH-1 LINE OUT(X)	206-13A
CP-61,522-2	4B	AUDIO CH-1 OUT(G)	206-12A
CP-61,522-1	5B	AUDIO CH-2 OUT(G)	206-11A
CP-61,525-1	6B	AUDIO MONITOR OUT(G)	206-11B
CP-61,525-3	7B	AUDIO MONITOR OUT(X)	204-8A,219-2
CP-61,522-1	8B	REG +12V OUT	203-8A,219-4
CP-62,541-4	9B	VIDEO IN (LINE)(X)	201-27B
	10B	L:Y-R,B	201-11B
CN PANEL,557-2	12B	DUB Y IN(G)	201-10A
CN PANEL,557-8	13B	DUB R-Y/B-Y IN(G)	201-13A
CN PANEL,557-6	14B	DUB B-Y/C DO IN(G)	
CN PANEL,557-4	15B	DUB R-Y/Y DO IN(G)	

CN211

BC-6,454-1	1	GND
BC-6,454-2	2	GND
BC-6,454-3	3	REG +5V OUT
BC-6,454-4	4	REG +5V OUT
BC-6,454-5	5	
BC-6,454-6	6	L:CH-2 LIMITER ON IN
BC-6,454-7	7	L:MIX TO CH-2 REC/EE
BC-6,454-8	8	L:CH-2 REC/EE IN
BC-6,454-9	9	L:CH-1 LIMITER ON IN
BC-6,454-10	10	L:CH-1 REC/EE IN

CN212

BC-6,453-1	1	L:MIX TO CH-1 REC/EE	204-36B
BC-6,453-2	2	FAST IN	205-5B
BC-6,453-3	3	L:CH-2 BIAS ON IN	204-20A,205-7B
BC-6,453-4	4	L:CH-1 BIAS ON IN	204-26A,205-8B
BC-6,453-5	5	L:CH-2 ERASE ON IN	205-9B
BC-6,453-6	6	L:CH-1 ERASE ON IN	205-10B
BC-6,453-7	7	L:CH-2 REC/EE ON IN	205-13B
BC-6,453-8	8	L:CH-1 REC/EE ON IN	205-14B
BC-6,453-9	9	L:TC ERASE ON IN	205-17B
BC-6,453-10	10	TC RELAY ON	205-18B

CN213

BC-6,452-1	1	L:TC REC IN	204-16B,205-18A
BC-6,452-2	2	L:AUDIO CH-2 REC IN	205-22B
BC-6,452-3	3	L:CH-2 PB CONTROL IN	204-23A,205-25B
BC-6,452-4	4	L:AUDIO CH-1 REC IN	205-28B
BC-6,452-5	5	L:CH-1 PB CONTROL IN	204-29B,205-27B
BC-6,452-6	6	L:AUDIO MUTE OUT	206-21A,23B,204-39B,205-39B
BC-6,452-7	7	L:VIDFO EE IN	203-33B,206-24B
BC-6,452-8	8	L:LIMITER ON OUT	206-24A
BC-6,452-9	9	L:MIXING TO CH-2 OUT	206-23B
BC-6,452-10	10	L:MIXING TO CH-1 OUT	206-25A

CN214

H903	1	AUDIO CH-1 HEAD(X)	205-37A
H903	2	AUDIO CH-1 HEAD(Y)	205-36A
H903	3	AUDIO CH-1 HEAD(G)	205-35A
H903	4	AUDIO CH-2 HEAD(X)	205-34A
H903	5	AUDIO CH-2 HEAD(G)	205-33A
H903	6	AUDIO CH-2 HEAD(Y)	205-32A

CN215

H903	1	CH-1 ERASE HEAD(G)	205-17A
H903	2	CH-1 ERASE HEAD(Y)	205-16A
H903	3	CH-1 ERASE HEAD(X)	205-15A
H903	4	CH-2 ERASE HEAD(G)	205-13A
H903	5	CH-2 ERASE HEAD(Y)	205-12A
H903	6	CH-2 ERASE HEAD(X)	205-11A
H903	7	TC ERASE HEAD(G)	205-9A
H903	8	TC ERASE HEAD(Y)	205-8A
H903	9	TC ERASE HEAD(X)	205-7A
	10		

CN216

MB-49,127-8	1	C DO OUT(X)	201-35A
MB-49,127-7	2	C DO OUT(G)	201-34A
MB-49,127-6	3	Y DO OUT(X)	201-32A
MB-49,127-5	4	Y DO OUT(G)	201-31A
	5		
	6		
MB-49,127-2	7	Y OUT(G)	201-28A
MB-49,127-1	8	R-Y/B-Y OUT(X)	201-25A
MB-49,127-4	9	R-Y/B-Y OUT(G)	201-24A
MB-49,127-3	10		

CN217

SD-6,922-5	1	C-C SYNC OUT(X)	201-18B
SD-6,922-6	2	C-C SYNC OUT(G)	201-17B
SD-6,924-9	3	L:CTDM OUT	206-5A,9,201-13B

DEC-8

CN202

A			B	
GND		1	GND	
		2		
REG +12V IN	+12V	3	REG +12V IN	+12V
REG +5V IN	+5V	4	REG +5V IN	+5V
		5		
203-6A,201-6A		6		201-6B,203-6B
203-7A,201-7A		7		201-7B,203-7B
		8		
		9		
		10		
		11		
		12	Y IN (X)	203-12A
		13	Y IN (G)	203-13A
		14		
		15		
		16	CHROMA IN (X)	203-16A
		17	CHROMA IN (G)	203-17A
		18		
		19		
		20	SEPARATED SYNC IN(X)	203-20A
		21	SEPARATED SYNC IN(G)	203-21A
203-22A,201-22A		22		201-22B,203-22B
		23		
		24	L:B&W MODE IN	203-24A
		25		
		26	H:STD/L:NON STD IN	206-6B,210-10A,11A
		27		
		28		
201-29B DECODE Y OUT(X)		29		
201-30B DECODE Y OUT(G)		30		
		31		
		32	1st FIELD PULSE OUT	206-4B
201-33B DECODE B-Y OUT(X)		33		
201-34B DECODE B-Y OUT(G)		34		
		35		
201-36B DECODE R-Y OUT(X)		36		
201-37B DECODE R-Y OUT(G)		37		
		38		
		39		
REG -5V IN	-5V	40	REG -5V IN	-5V
REG -12V IN	-12V	41	REG -12V IN	-12V
		42		
GND		43	GND	

DEC-7(NTSC)/DEC-9(PAL)

CN203

A			B	
GND		1	GND	
		2		
REG +12V IN	+12V	3	REG +12V IN	+12V
REG +5V IN	+5V	4	REG +5V IN	+5V
		5		
202-6A,201-6A		6		201-6B,202-6B
202-7A,201-7A		7		201-7B,202-7B
219-1,210-9B VIDEO IN (LINE)(X)		8		
219-2,210-9A VIDEO IN (LINE)(G)		9		
		10		
		11		
202-12B Y OUT (X)		12		
202-13B Y OUT (G)		13		
		14		
		15		
202-16B CHROMA OUT (X)		16		
202-17B CHROMA OUT (G)		17		
		18		
		19		
202-20B SEPARATED SYNC OUT(X)		20		
202-21B SEPARATED SYNC OUT(G)		21		
202-22A,201-22A		22		201-22B,202-22B
		23		
202-24B L:B&W MODE OUT		24		
		25		
		26		
		27		
		28		
		29		
		30		
		31		
		32		
		33	L:VIDEO EE IN	213-7,206-24B
		34	RF METER IN	206-7A
		35	L:AGC/H:MANUAL IN	206-7B
		36	VIDEO LEVEL CONT IN	206-8A
		37	VIDEO/RF METER OUT	206-8B
		38		
		39		
REG -5V IN	-5V	40	REG -5V IN	-5V
REG -12V IN	-12V	41	REG -12V IN	-12V
		42		
GND		43	GND	

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CN204

A			
GND		1	GND
		2	
REG +12V IN	+12V	3	REG +12
(REG +5V IN)	+5V	4	(REG +5
205-5A FILTERED +12V OUT		5	FILTERE
GND		6	GND
210-2B,206-14B CH-2 LINE OUT(X)		7	GND
210-2A,206-14A CH-2 LINE OUT(G)		8	GND
GND		9	L:CH-2
206-15B CH-2 PB VR IN/OUT(X)		10	GND
206-15A CH-2 PB VR IN/OUT(Y)		11	GND
206-16B CH-2 PB VR IN/OUT(G)		12	GND
GND		13	L:MIX T
206-16A CH-2 REC/EE VR IN(X)		14	GND
206-17B CH-2 REC/EE VR IN(G)		15	GND
206-21B L:AUDIO NR ON IN		16	L:TC RE
211-8 L:CH-2 REC/EE IN		17	CH-2 PB
GND		18	CH-2 PB
GND		19	
205-7B,212-3 L:CH-2 BIAS ON IN		20	GND
GND		21	CH-2 RE
GND		22	CH-2 RE
205-25B,213-3 L:CH-2 PB CONTROL IN		23	GND
GND		24	CH-1 RE
GND		25	CH-1 RE
205-8B,212-4 L:CH-1 BIAS ON IN		26	GND
GND		27	CH-1 PB
GND		28	CH-1 PB
GND		29	L:CH-1
206-17A CH-1 REC/EE VR IN(X)		30	GND
206-18B CH-1 REC/EE VR IN(G)		31	GND
GND		32	L:CH-1
206-18A CH-1 PB VR IN/OUT(X)		33	GND
206-19B CH-1 PB VR IN/OUT(Y)		34	GND
206-19A CH-1 PB VR IN/OUT(G)		35	L:CH-1
GND		36	L:MIX T
210-3B,206-20A CH-1 LINE OUT(X)		37	GND
210-3A,206-20B CH-1 LINE OUT(G)		38	GND
205-39A FILTERED -12V OUT		39	L:AUDIO
		40	
REG -12V IN	-12V	41	REG -12
		42	
GND		43	GND

C-8

CN202

	B	
1	GND	
2		
3	REG +12V IN	+12V
4	REG +5V IN	+5V
5		
6		201-6B,203-6B
7		201-7B,203-7B
8		
9		
10		
11		
12	Y IN (X)	203-12A
13	Y IN (G)	203-13A
14		
15		
16	CHROMA IN (X)	203-16A
17	CHROMA IN (G)	203-17A
18		
19		
20	SEPARATED SYNC IN(X)	203-20A
21	SEPARATED SYNC IN(G)	203-21A
22		201-22B,203-22B
23		
24	L:B&W MODE IN	203-24A
25		
26	H:STD/L:NON STD IN	206-6B,210-10A,11A
27		
28		
29		
30		
31		
32	1st FIELD PULSE OUT	206-4B
33		
34		
35		
36		
37		
38		
39		
40	REG -5V IN	-5V
41	REG -12V IN	-12V
42		
43	GND	

DEC-7(NTSC)/DEC-9(PAL)

CN203

	A		B	
	GND	1	GND	
		2		
+12V	REG +12V IN	3	REG +12V IN	+12V
+5V	REG +5V IN	4	REG +5V IN	+5V
		5		
202-6A,201-6A		6		201-6B,202-6B
202-7A,201-7A		7		201-7B,202-7B
219-1,210-9B	VIDEO IN (LINE)(X)	8		
219-2,210-9A	VIDEO IN (LINE)(G)	9		
		10		
		11		
202-12B	Y OUT (X)	12		
202-13B	Y OUT (G)	13		
		14		
		15		
202-16B	CHROMA OUT (X)	16		
202-17B	CHROMA OUT (G)	17		
		18		
		19		
202-20B	SEPARATED SYNC OUT(X)	20		
202-21B	SEPARATED SYNC OUT(G)	21		
202-22A,201-22A		22		201-22B,202-22B
		23		
202-24B	L:B&W MODE OUT	24		
		25		
		26		
		27		
		28		
		29		
		30		
		31		
		32		
		33	L:VIDEO EE IN	213-7,206-24B
		34	RF METER IN	206-7A
		35	L:AGC/H:MANUAL IN	206-7B
		36	VIDEO LEVEL CONT IN	206-8A
		37	VIDEO/RF METER OUT	206-8B
		38		
		39		
-5V	REG -5V IN	40	REG -5V IN	-5V
-12V	REG -12V IN	41	REG -12V IN	-12V
		42		
	GND	43	GND	

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CN204

	A		B	
	GND	1	GND	
		2		
+12V	REG +12V IN	3	REG +12V IN	+12V
+5V	(REG +5V IN)	4	(REG +5V IN)	+5V
205-5A	FILTERED +12V OUT	5	FILTERED +12V OUT	205-5A
	GND	6	GND	
210-2B,206-14B	CH-2 LINE OUT(X)	7	GND	
210-2A,206-14A	CH-2 LINE OUT(G)	8	GND	
	GND	9	L:CH-2 LIMITER ON IN	211-6
206-15B	CH-2 PB VR IN/OUT(X)	10	GND	
206-15A	CH-2 PB VR IN/OUT(Y)	11	GND	
206-16B	CH-2 PB VR IN/OUT(G)	12	GND	
	GND	13	L:MIX TO CH-2 REC/EE	211-7
206-16A	CH-2 REC/EE VR IN(X)	14	GND	
206-17B	CH-2 REC/EE VR IN(G)	15	GND	
206-21B	L:AUDIO NR ON IN	16	L:TC REC IN	213-1,205-18A
211-8	L:CH-2 REC/EE IN	17	CH-2 PB IN(G)	205-20A
	GND	18	CH-2 PB IN(X)	205-21A
	GND	19		
205-7B,212-3	L:CH-2 BIAS ON IN	20	GND	
	GND	21	CH-2 REC OUT(X)	205-23A
	GND	22	CH-2 REC OUT(G)	205-24A
205-25B,213-3	L:CH-2 PB CONTROL IN	23	GND	
	GND	24	CH-1 REC OUT(X)	205-26A
	GND	25	CH-1 REC OUT(G)	205-27A
205-8B,212-4	L:CH-1 BIAS ON IN	26	GND	
	GND	27	CH-1 PB IN(X)	205-29A
	GND	28	CH-1 PB IN(G)	205-30A
	GND	29	L:CH-1 PB CONTROL IN	213-5,205-27B
206-17A	CH-1 REC/EE VR IN(X)	30	GND	
206-18B	CH-1 REC/EE VR IN(G)	31	GND	
	GND	32	L:CH-1 REC/EE IN	211-9
206-18A	CH-1 PB VR IN/OUT(X)	33	GND	
206-19B	CH-1 PB VR IN/OUT(Y)	34	GND	
206-19A	CH-1 PB VR IN/OUT(G)	35	L:CH-1 LIMITER ON	211-10
	GND	36	L:MIX TO CH-1 REC/EE	212-1
210-3B,206-20A	CH-1 LINE OUT(X)	37	GND	
210-3A,206-20B	CH-1 LINE OUT(G)	38	GND	
205-39A	FILTERED -12V OUT	39	L:AUDIO MUTE IN	206-21A,23B, 205-39B,213-6
-12V	REG -12V IN	40		
		41	REG -12V IN	-12V
		42		
	GND	43	GND	

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CN205

	A		B	
	GND	1	GND	
+12V	REG +12V IN	3	REG +12V IN	+12V
+5V	(REG +5V IN)	4	(REG +5V IN)	+5V
204-5A,B	FILTERED +12V IN	5	L:PAST IN	212-2
	GND	6	L:BIAS OSC ON IN	206-23A
215-9	TC ERASE HEAD (X)	7	L:CH-2 BIAS ON	212-3,204-20A
215-8	TC ERASE HEAD (Y)	8	L:CH-1 BIAS ON	212-4,204-26A
215-7	TC ERASE HEAD (G)	9	L:CH-2 ERASE ON	212-5
	GND	10	L:CH-1 ERASE ON	212-6
215-6	CH-2 ERASE HEAD(X)	11	GND	
215-5	CH-2 ERASE HEAD(Y)	12	GND	
215-4	CH-2 ERASE HEAD(G)	13	CH-2 RELAY ON	212-7
	GND	14	CH-1 RELAY ON	212-8
215-3	CH-1 ERASE HEAD(X)	15	TC REC SIGNAL(G)	206-9B
215-2	CH-1 ERASE HEAD(Y)	16	TC REC SIGNAL(X)	206-10B
215-1	CH-1 ERASE HEAD(G)	17	L:TC ERASE ON	212-9
204-16B,213-1	L:TC REC IN	18	TC RELAY ON	212-10
	GND	19		
204-17B	CH-2 PB OUT(G)	20	GND	
204-18B	CH-2 PB OUT(X)	21	GND	
	GND	22	L:AUDIO CH-2 REC IN	213-2
204-21B	CH-2 REC IN(X)	23	GND	
204-22B	CH-2 REC IN(G)	24	GND	
	GND	25	L:CH-2 PB CONTROL IN	213-3,204-23A
204-24B	CH-1 REC IN(X)	26	GND	
204-25B	CH-1 REC IN(G)	27	L:CH-1 PB CONTROL IN	213-5,204-29B
	GND	28	L:AUDIO CH-1 REC IN	213-4
204-27B	CH-1 PB OUT(X)	29		
204-28B	CH-1 PB OUT(G)	30	GND	
	GND	31	GND	
214-6	AUDIO CH-2 HEAD (G)	32	GND	
214-5	AUDIO CH-2 HEAD (Y)	33	GND	
214-4	AUDIO CH-2 HEAD (X)	34	GND	
214-3	AUDIO CH-1 HEAD (G)	35	GND	
214-2	AUDIO CH-1 HEAD (Y)	36	GND	
214-1	AUDIO CH-1 HEAD (X)	37	GND	
	GND	38	GND	
204-39A	FILTERED -12V IN	39	L:AUDIO MUTE IN	206-21A,23B, 204-39B,213-6
-12V	REG -12V IN	40		
		41	REG -12V IN	-12V
		42		
	GND	43	GND	

CN210

CP-61,522-7	1A	GND
CP-61,526-1	2A	CH-2 LINE OUT(G)
CP-61,527-1	3A	CH-1 LINE OUT(G)
CP-61,522-4	4A	AUDIO CH-1 OUT(R)
CP-61,522-3	5A	AUDIO CH-2 OUT(X)
CP-61,522-6	6A	REG -12V OUT
	7A	-12V
	8A	REG +12V
CP-62,541-5	9A	VIDEO IN (LINE)(G)
	10A	H:STD/L:NON STD OUT
	11A	H:STD/L:NON STD OUT
CN PANEL,557-1	12A	DUB Y IN(X)
CN PANEL,557-7	13A	DUB R-Y/B-Y IN(X)
CN PANEL,557-5	14A	DUB B-Y/C DO IN(X)
CN PANEL,557-3	15A	DUB R-Y/Y DO IN(X)
CP-61,528-4	1B	GND
CP-61,526-3	2B	CH-2 LINE OUT(X)
CP-61,527-3	3B	CH-1 LINE OUT(X)
CP-61,522-5	4B	AUDIO CH-1 OUT(G)
CP-61,522-2	5B	AUDIO CH-2 OUT(G)
CP-61,525-1	6B	AUDIO MONITOR OUT(G)
CP-61,522-1	7B	AUDIO MONITOR OUT(X)
CP-62,541-4	9B	VIDEO IN (LINE)(X)
	10B	L:Y-R,B
	11B	
CN PANEL,557-2	12B	DUB Y IN(G)
CN PANEL,557-8	13B	DUB R-Y/B-Y IN(G)
CN PANEL,557-6	14B	DUB B-Y/C DO IN(G)
CN PANEL,557-4	15B	DUB R-Y/Y DO IN(G)

CN211

BC-6,454-1	1	GND
BC-6,454-2	2	GND
BC-6,454-3	3	REG +5V OUT
BC-6,454-4	4	REG +5V OUT
BC-6,454-5	5	
BC-6,454-6	6	L:CH-2 LIMITER ON IN
BC-6,454-7	7	L:MIX TO CH-2 REC/EE
BC-6,454-8	8	L:CH-2 REC/EE IN
BC-6,454-9	9	L:CH-1 REC/EE IN
BC-6,454-10	10	L:CH-1 LIMITER ON IN

CN212

BC-6,453-1	1	L:MIX TO CH-1 REC/EE
BC-6,453-2	2	FAST IN
BC-6,453-4	3	L:CH-2 BIAS ON IN
BC-6,453-3	4	L:CH-1 BIAS ON IN
BC-6,453-5	5	L:CH-2 ERASE ON IN
BC-6,453-6	6	L:CH-1 ERASE ON IN
BC-6,453-7	7	CH-2 RELAY ON
BC-6,453-8	8	CH-1 RELAY ON
BC-6,453-9	9	L:TC ERASE ON IN
BC-6,453-10	10	TC RELAY ON

CN213

DC-6,452-1	1	L:TC REC IN
DC-6,452-2	2	L:AUDIO CH-2 REC IN
DC-6,452-3	3	L:CH-2 PB CONTROL IN
DC-6,452-4	4	L:AUDIO CH-1 REC IN
DC-6,452-5	5	L:CH-1 PB CONTROL IN
DC-6,452-7	6	L:VIDEO EE IN
DC-6,452-8	7	L:LIMITER ON OUT
DC-6,452-9	8	L:MIXING TO CH-2 OUT
DC-6,452-10	9	L:MIXING TO CH-1 OUT
	10	

CN214

H903	1	AUDIO CH-1 HEAD(X)
H903	2	AUDIO CH-1 HEAD(Y)
H903	3	AUDIO CH-1 HEAD(G)
H903	4	AUDIO CH-2 HEAD(X)
H903	5	AUDIO CH-2 HEAD(Y)
H903	6	AUDIO CH-2 HEAD(G)

CN215

H903	1	CH-1 ERASE HEAD(G)
H903	2	CH-1 ERASE HEAD(Y)
H903	3	CH-1 ERASE HEAD(X)
H903	4	CH-2 ERASE HEAD(G)
H903	5	CH-2 ERASE HEAD(Y)
H903	6	CH-2 ERASE HEAD(X)
H903	7	TC ERASE HEAD(G)
H903	8	TC ERASE HEAD(Y)
H903	9	TC ERASE HEAD(X)
	10	

CN216

MB-49,127-8	1	C DO OUT(X)
MB-49,127-7	2	Y DO OUT(X)
MB-49,127-6	3	C DO OUT(G)
MB-49,127-5	4	Y DO OUT(G)
	5	
	6	
MB-49,127-2	7	Y OUT(X)
MB-49,127-1	8	Y OUT(G)
MB-49,127-4	9	R-Y/B-Y OUT(X)
MB-49,127-3	10	R-Y/B-Y OUT(G)

CN217

SD-6,922-5	1	C-C SYNC OUT(X)
SD-6,922-6	2	C-C SYNC OUT(G)
SD-6,922-9	3	L:CVDM OUT

CN218

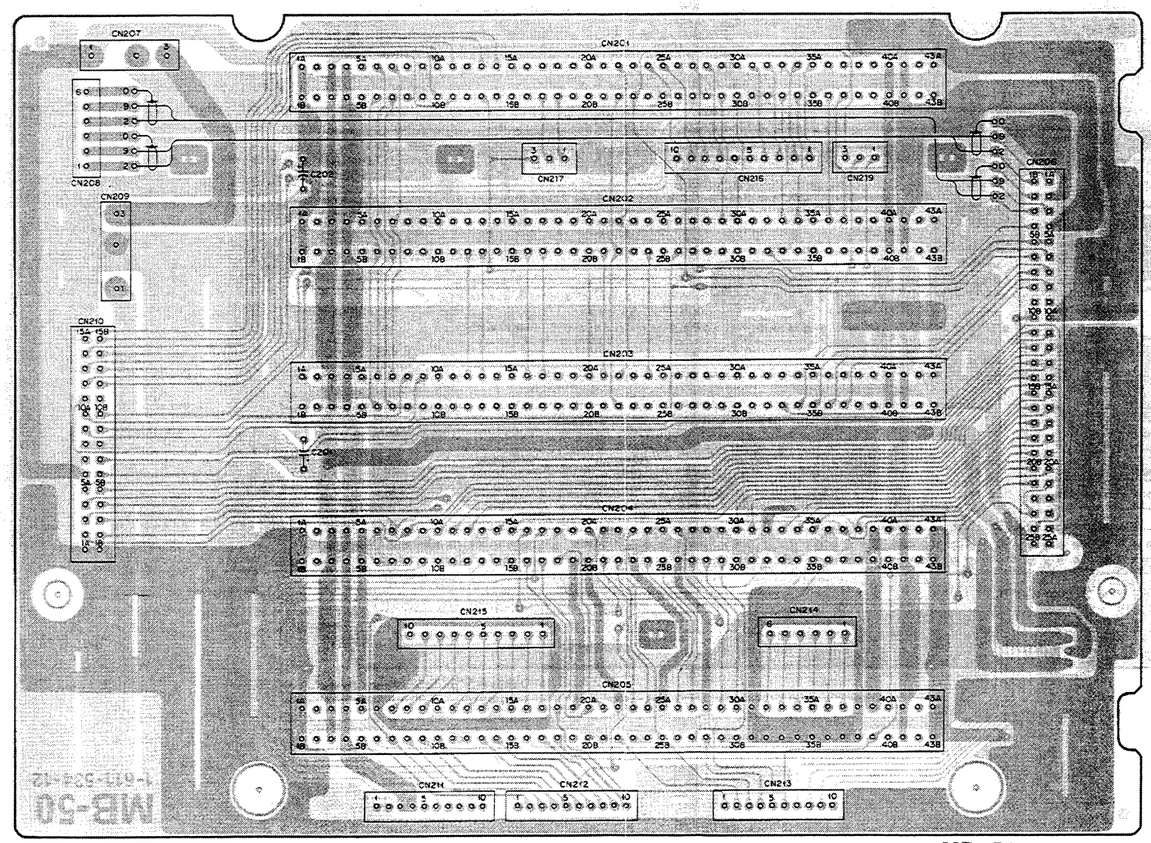
	1	REG +12V OUT
	2	GND
	3	REG -12V OUT

CN219

MB-49,139-3	1	VIDEO IN(LINE) OUT(G)
MB-49,139-2	2	VIDEO IN(LINE) OUT(X)
MB-49,139-1	3	L:Y-R,B OUT

MB-50
1-611-534-12
BVW-40
BVW-40P

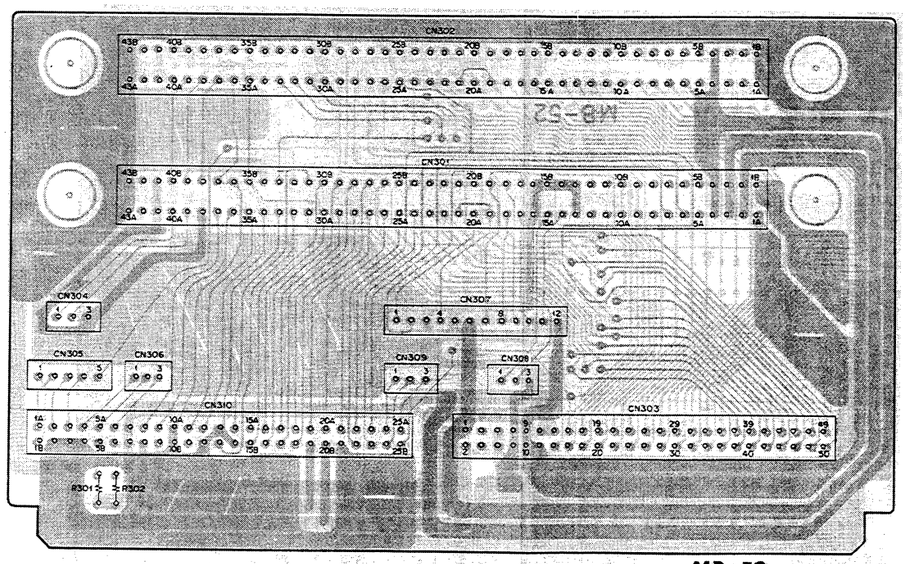
MB-50 (MOTHER BOARD)



MB-50 - SOLDERING SIDE -

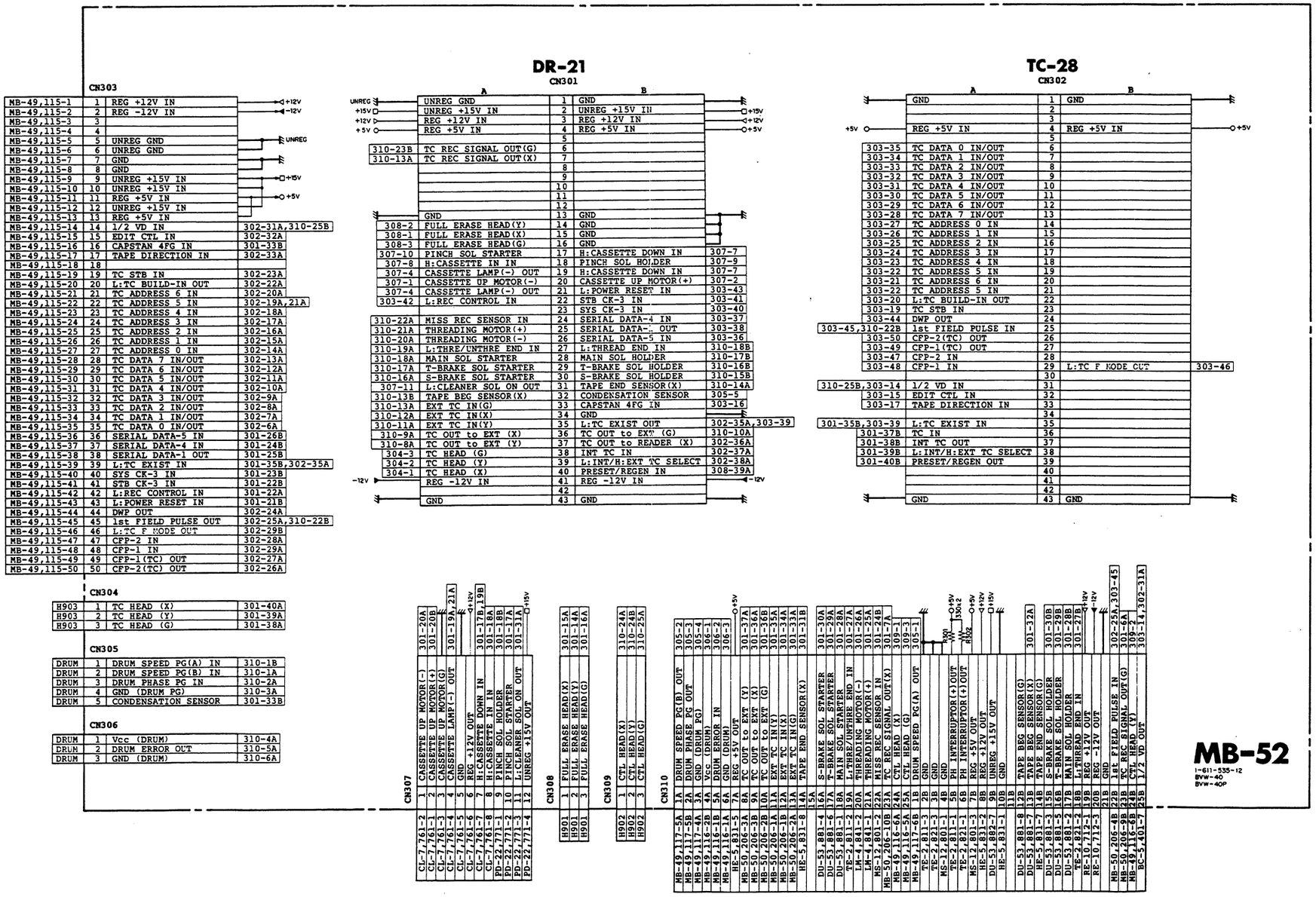
1-611-534-12
8VW-40
8VW-40P

MB-52 (MOTHER BOARD)



MB-52 -SOLDERING SIDE-
1-611-535-12
8VW-40
8VW-40P

MB-52 (MOTHER BOARD)



MB-73 (MOTHER BOARD)

PR-48

CN108

A		B	
	GND	1	GND
-11V	REG -11V IN	2	REG -11V IN
		3	
-12V	REG -12V IN	4	REG -12V IN
-5V	REG -5V IN	5	REG -5V IN
110-6A,112-6A	H:NORMAL/L:BID IN	6	CLAMP OFF IN
110-7A	CW DATA 2**6 OUT	7	CW DATA 2**7 OUT
110-8A	CW DATA 2**4 OUT	8	CW DATA 2**5 OUT
110-9A	CW DATA 2**2 OUT	9	CW DATA 2**3 OUT
110-10A	CW DATA 2**0 OUT	10	CW DATA 2**1 OUT
	GND	11	GND
		12	CW CK IN
	GND	13	GND
110-14A	YW DATA 2**6 OUT	14	YW DATA 2**7 OUT
110-15A	YW DATA 2**4 OUT	15	YW DATA 2**5 OUT
110-16A	YW DATA 2**2 OUT	16	YW DATA 2**3 OUT
110-17A	YW DATA 2**0 OUT	17	YW DATA 2**1 OUT
156-3	CLAMP CR	18	GND
		19	YW CK IN
110-20A	PB V OUT	20	GND
112-15A,110-21A	CS DO OUT	21	C PB SYNC OUT
112-23A,110-22A	YS DO OUT	22	Y SH IN
154-2	DELAYED TDM-C IN(X)	23	Y PB SYNC OUT
154-1	DELAYED TDM-C IN(G)	24	SET UP CONTROL IN
112-14A	CW CLAMP IN	25	R CLAMP IN
153-8	DEMOD'ED Y IN(G)	26	ADVANCED Y IN(G)
153-5	DEMOD'ED Y IN(X)	27	ADVANCED Y IN(X)
153-4	R-Y/B-Y IN(G)	28	R-Y/B-Y IN(G)
153-2	R-Y/B-Y IN(X)	29	R-Y/B-Y IN(X)
156-1	SPEED	30	SPEED GND

A		B	
	GND	1	GND
-11V	REG -11V IN	2	REG -11V IN
		3	
-12V	REG -12V IN	4	REG -12V IN
-5V	REG -5V IN	5	REG -5V IN
108-6A,112-6A	H:NORMAL/L:BID IN	6	
108-7A	CW DATA 2**6 IN	7	CW DATA 2**7 IN
108-8A	CW DATA 2**4 IN	8	CW DATA 2**5 IN
108-9A	CW DATA 2**2 IN	9	CW DATA 2**3 IN
108-10A	CW DATA 2**0 IN	10	CW DATA 2**1 IN
	GND	11	GND
112-12A	CW ZERO IN	12	CW CK IN
	GND	13	GND
108-14A	YW DATA 2**6 IN	14	YW DATA 2**7 IN
108-15A	YW DATA 2**4 IN	15	YW DATA 2**5 IN
108-16A	YW DATA 2**2 IN	16	YW DATA 2**3 IN
108-17A	YW DATA 2**0 IN	17	YW DATA 2**1 IN
	GND	18	GND
112-19A	YW ZERO IN	19	YW CK IN
108-20A	PB V IN	20	GND
112-15A,108-21A	CS DO IN	21	Y COUNT CK IN
112-23A,108-22A	YS DO IN	22	L:FRB MODE IN
153-5	C DO DET PULSE IN	23	
153-6	Y DO DET PULSE IN	24	
112-17A	Y COUNT H IN	25	LOAD V OUT (P)
112-16A	C COUNT H IN	26	
156-6	V SELECT (DT)	27	
156-5	V (DT)	28	
156-4	SKP (DT)	29	
	GND	30	GND

A		B	
	GND	1	GND
-11V	REG -11V IN	2	REG -11V IN
		3	
-12V	REG -12V IN	4	REG -12V IN
-5V	REG -5V IN	5	REG -5V IN
110-6A,108-6A	H:NORMAL/L:BID OUT	6	CLAMP OFF OUT
155-6	L:NORMAL/H:BID IN	7	
		8	
154-8	L:EN FR OFF OUT (N)	9	
154-8	H:SHIFT OFF IN	10	
	GND	11	GND
110-12A	CW ZERO OUT	12	CW CK OUT
	GND	13	GND
108-25A	CW CLAMP OUT	14	
110-21A,108-21A	CS DO IN	15	C PB SYNC IN
110-26A	C COUNT H OUT	16	SPARE EN CK-1 out
110-25A	Y COUNT H OUT	17	
	GND	18	GND
110-19A	YW ZERO OUT	19	YW CK OUT
	GND	20	GND
156-7	C SH OUT	21	Y COUNT CK OUT
156-8,108-22B	Y SH OUT	22	L:FRB MODE OUT
110-22A,108-22A	YS DO IN	23	Y PB SYNC IN
151-4	L:MODE-EDIT IN	24	
136-1	L:CTDM IN	25	
154-3	L:Y-R,B IN	26	
136-2	H:8H ADVANCE OFF IN	27	
156-2,108-30B	SPEED GND	28	
119-4	Y/C DELAY CONTROL IN	29	
	GND	30	GND

CN107

A		B	
151-10	TBC R-Y OUT (G)	1	TBC R-Y OUT (G)
151-9	TBC R-Y OUT (X)	2	TBC R-Y OUT (X)
151-8	TBC B-Y OUT (G)	3	TBC B-Y OUT (G)
151-7	TBC B-Y OUT (X)	4	TBC B-Y OUT (X)
151-6	TBC Y OUT (G)	5	TBC Y OUT (G)
151-5	TBC Y OUT (X)	6	TBC Y OUT (X)
119-1	VIDEO CONTROL IN	7	CHROMA CONTROL IN
	GND	8	GND
109-7A	DL R CK IN	9	CR 1/2 CK IN
153-9,109-10A	CR DO OUT	10	R ZERO IN
109-11A	YR DATA 2**6 IN	11	YR DATA 2**7 IN
109-12A	YR DATA 2**4 IN	12	YR DATA 2**5 IN
109-13A	YR DATA 2**2 IN	13	YR DATA 2**3 IN
109-14A	YR DATA 2**0 IN	14	YR DATA 2**1 IN
	GND	15	GND
109-16A	B-Y R DATA 2**6 IN	16	B-Y R DATA 2**7 IN
109-17A	B-Y R DATA 2**4 IN	17	B-Y R DATA 2**5 IN
109-18A	B-Y R DATA 2**2 IN	18	B-Y R DATA 2**3 IN
109-19A	B-Y R DATA 2**0 IN	19	B-Y R DATA 2**1 IN
	GND	20	GND
109-21A	R-Y R DATA 2**6 IN	21	R-Y R DATA 2**7 IN
109-22A	R-Y R DATA 2**4 IN	22	R-Y R DATA 2**5 IN
109-23A	R-Y R DATA 2**2 IN	23	R-Y R DATA 2**3 IN
109-24A	R-Y R DATA 2**0 IN	24	R-Y R DATA 2**1 IN
	GND	25	GND
+5V	REG +5V IN	26	REG +5V IN
		27	
+12V	REG +12V IN	28	REG +12V IN
+11V	REG +11V IN	29	REG +11V IN
	GND	30	GND

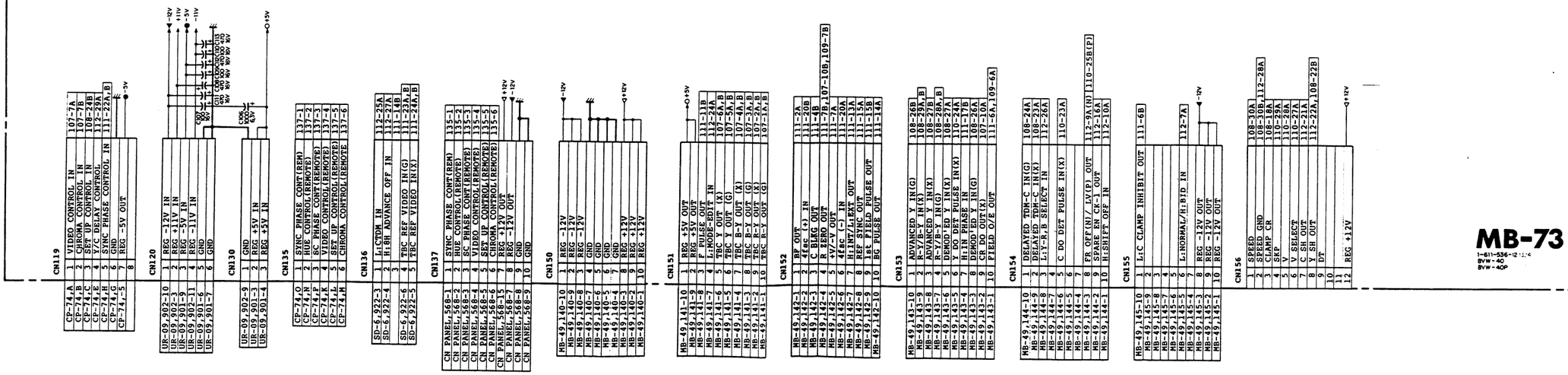
CN109

A		B	
	GND	1	GND
		2	
111-3A	FH IN	3	
111-4A	HD IN	4	
111-5A	VD IN	5	YD BLKG IN
153-10,111-6A	FIELD O/E IN	6	
107-9A	DL R CK OUT	7	R ZERO IN
	GND	8	GND
111-9A	YR CK IN	9	CR 1/2CK IN
153-9,107-10A	CR DO IN	10	
107-11A	YR DATA 2**6 OUT	11	YR DATA 2**7 OUT
107-12A	YR DATA 2**4 OUT	12	YR DATA 2**5 OUT
107-13A	YR DATA 2**2 OUT	13	YR DATA 2**3 OUT
107-14A	YR DATA 2**0 OUT	14	YR DATA 2**1 OUT
	GND	15	GND
107-16A	B-Y R DATA 2**6 OUT	16	B-Y R DATA 2**7 OUT
107-17A	B-Y R DATA 2**4 OUT	17	B-Y R DATA 2**5 OUT
107-18A	B-Y R DATA 2**2 OUT	18	B-Y R DATA 2**3 OUT
107-19A	B-Y R DATA 2**0 OUT	19	B-Y R DATA 2**1 OUT
	GND	20	GND
107-21A	R-Y R DATA 2**6 OUT	21	R-Y R DATA 2**7 OUT
107-22A	R-Y R DATA 2**4 OUT	22	R-Y R DATA 2**5 OUT
107-23A	R-Y R DATA 2**2 OUT	23	R-Y R DATA 2**3 OUT
107-24A	R-Y R DATA 2**0 OUT	24	R-Y R DATA 2**1 OUT
	GND	25	GND
+5V	REG +5V IN	26	REG +5V IN
		27	
+11V	REG +11V IN	28	
	GND	29	REG +11V IN
		30	GND

A		B	
	GND	1	GND
		2	
152-1	BF OUT	3	
109-3A	FH OUT	4	
109-4A	HD OUT	5	
109-5A	VD OUT	6	
153-10,109-6A	FIELD O/E OUT	7	
152-5	+V/-V OUT	8	
	GND	9	
109-9A	YR CK OUT	10	
		11	
		12	
152-7	H:INT/L:EXT OUT	13	
152-10	BG PULSE OUT	14	
152-8	REF SYNC OUT	15	
		16	
		17	
		18	
	GND	19	GND
152-6	4fsc(-) IN	20	4fsc(+) IN
	GND	21	GND
119-5	SYNC PHASE CONTROL IN	22	SYNC PHASE CONTROL IN
136-4	TBC REF VIDEO IN(G)	23	TBC REF VIDEO IN(G)
136-5	TBC REF VIDEO IN(X)	24	TBC REF VIDEO IN(X)
		25	
+5V	REG +5V IN	26	REG +5V IN
		27	
		28	
+11V	REG +11V IN	29	REG +11V IN
	GND	30	GND

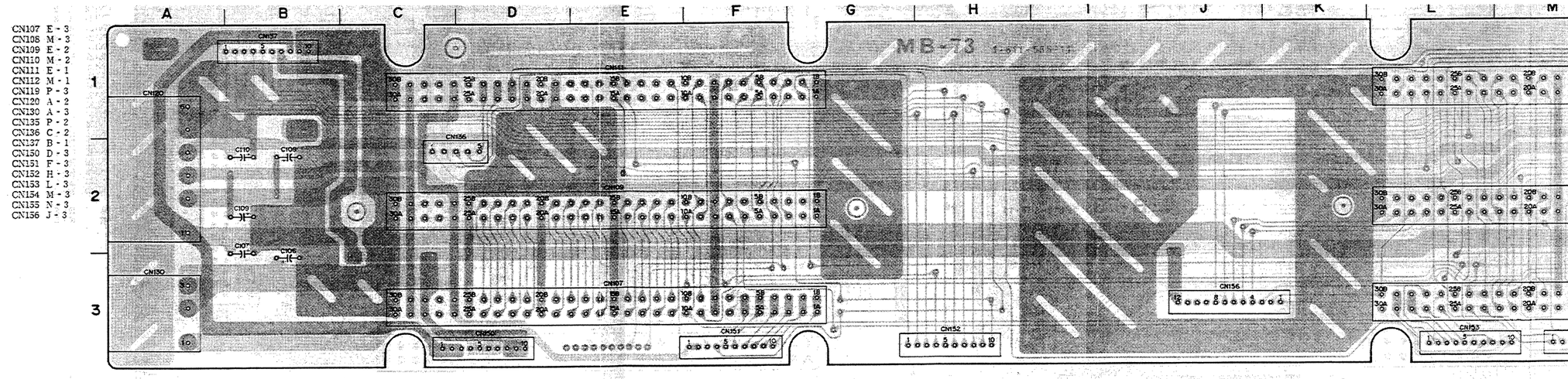
CN111

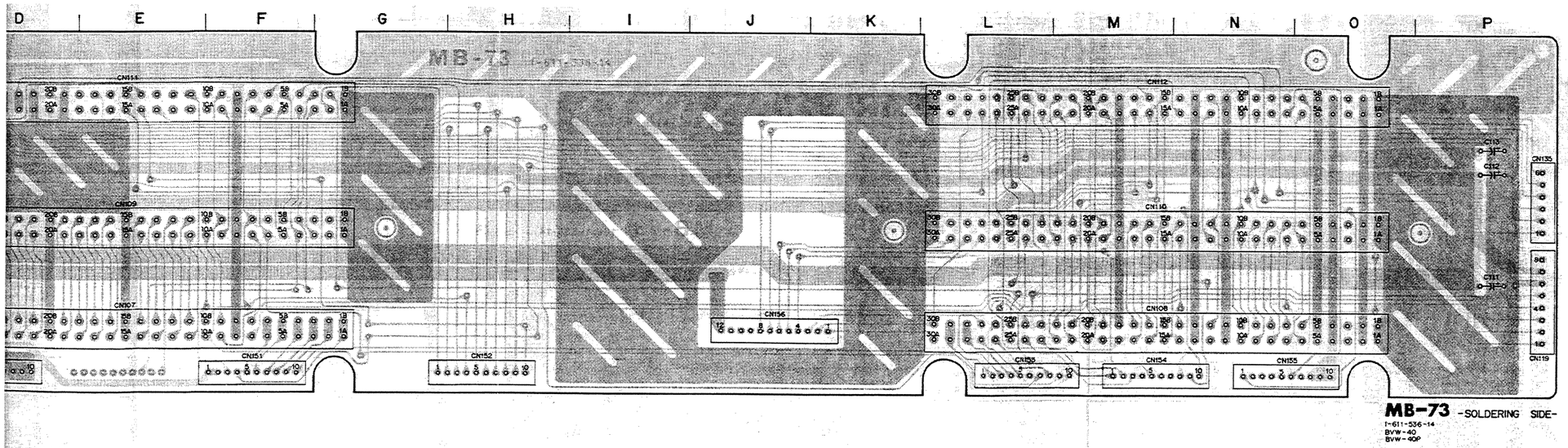
A		B	
	GND	1	GND
152-1	BF OUT	2	R CLAMP OUT
109-3A	FH OUT	3	
109-4A	HD OUT	4	C BLKG OUT
109-5A	VD OUT	5	YD BLKG OUT
153-10,109-6A	FIELD O/E OUT	6	L:CLAMP INHIBIT OUT
152-5	+V/-V OUT	7	R ZERO OUT
	GND	8	GND
109-9A	YR CK OUT	9	CR 1/2CK OUT
		10	
		11	F PULSE OUT
		12	
152-7	H:INT/L:EXT OUT	13	
152-10	BG PULSE OUT	14	
152-8	REF SYNC OUT	15	1st FIELD PULSE OUT
		16	
		17	H:IN PHASE IN
		18	
	GND	19	GND
152-6	4fsc(-) IN	20	4fsc(+) IN
	GND	21	GND
119-5	SYNC PHASE CONTROL IN	22	SYNC PHASE CONTROL IN
136-4	TBC REF VIDEO IN(G)	23	TBC REF VIDEO IN(G)
136-5	TBC REF VIDEO IN(X)	24	TBC REF VIDEO IN(X)
		25	
+5V	REG +5V IN	26	REG +5V IN
		27	
		28	
+11V	REG +11V IN	29	REG +11V IN
	GND	30	GND



MB-73 (MOTHER BOARD)

CN107 E - 3
CN108 M - 3
CN109 E - 2
CN110 M - 2
CN111 E - 1
CN112 M - 1
CN119 P - 3
CN120 A - 2
CN130 A - 3
CN135 P - 2
CN136 C - 2
CN137 B - 1
CN150 D - 3
CN151 F - 3
CN152 H - 3
CN153 L - 3
CN154 M - 3
CN155 N - 3
CN156 J - 3

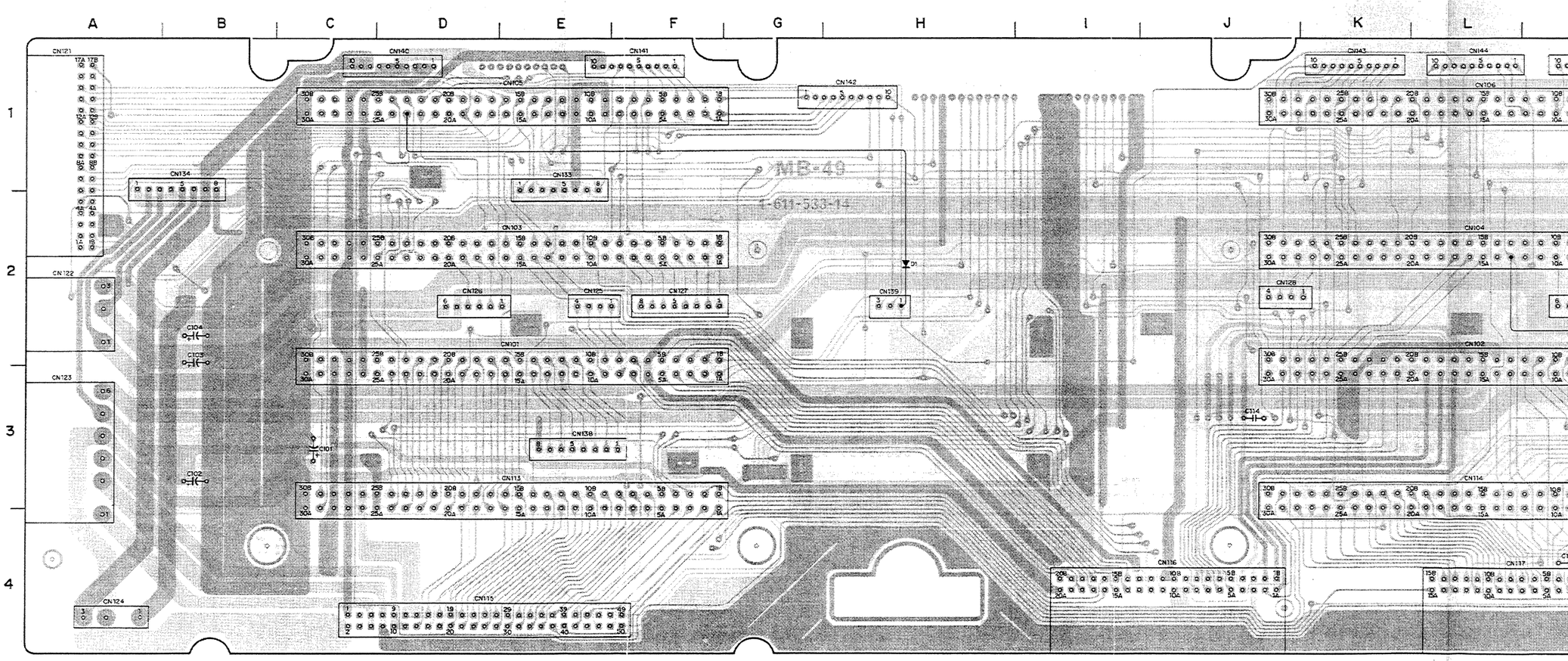


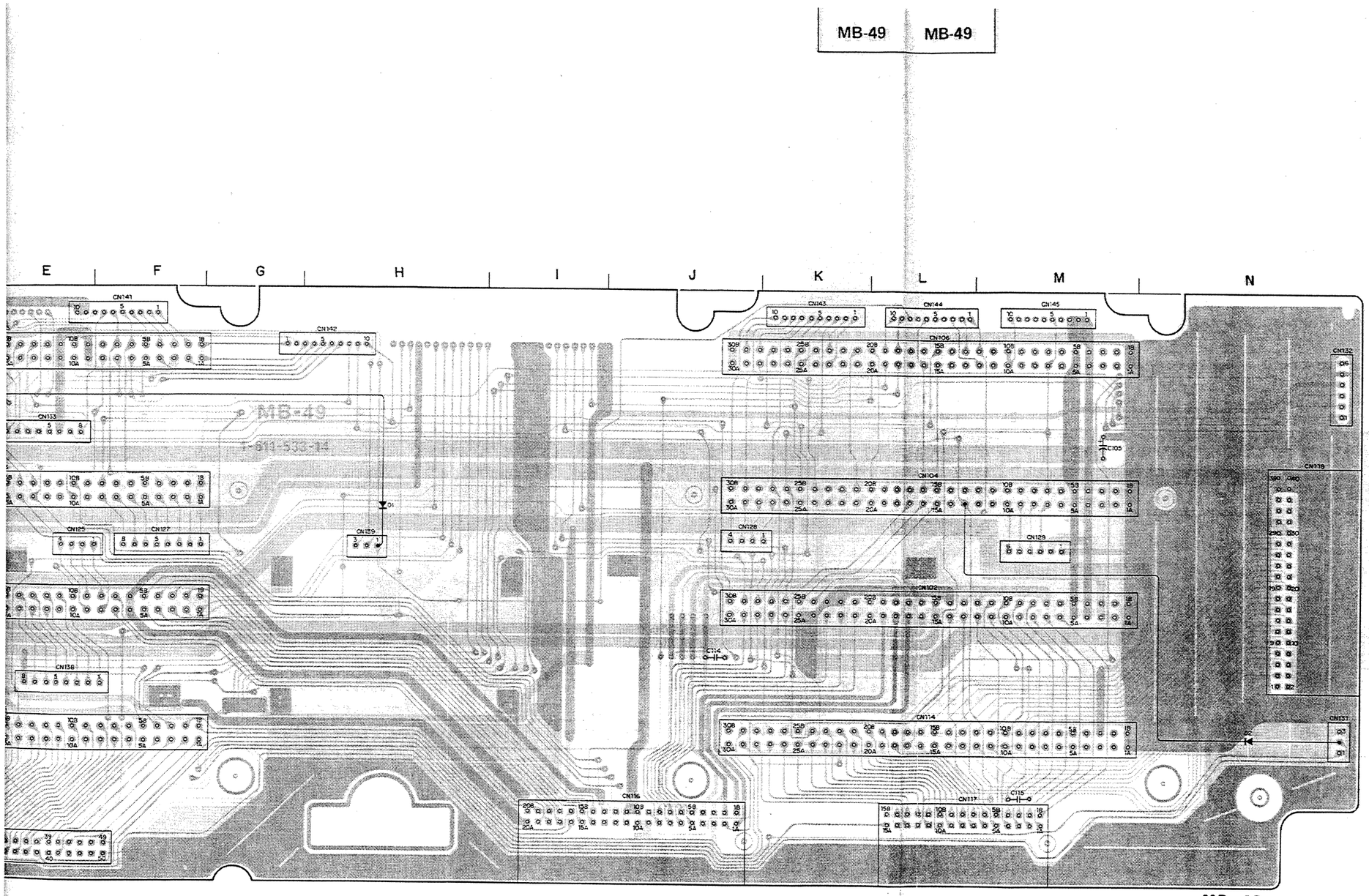


MB-73 -SOLDERING SIDE-
1-611-536-14
BVW-40
BVW-40P

MB-49 MB-49

MB-49 (MOTHER BOARD)





MB-49 -SOLDERING SIDE-

1-611-533-14
BVW-40
BVW-40P

CN101	E - 2
CN102	L - 2
CN103	E - 2
CN104	L - 2
CN105	E - 1
CN106	L - 1
CN113	E - 3
CN114	L - 3
CN115	D - 4
CN116	J - 4
CN117	L - 4
CN118	N - 2
CN121	A - 1
CN122	A - 2
CN123	A - 3
CN124	A - 4
CN125	E - 2
CN126	D - 2
CN127	F - 2
CN128	J - 2
CN129	M - 2
CN131	N - 3
CN132	N - 1
CN133	E - 1
CN134	B - 1
CN138	E - 3
CN139	H - 2
CN140	D - 1
CN141	F - 1
CN142	H - 1
CN143	K - 1
CN144	L - 1
CN145	M - 1
D1	H - 2
D2	N - 3

MB-49 (MOTHER BOARD)

CN115

MB-52,303-1	1	REG +12V	+12V
MB-52,303-2	2	REG -12V	+12V
MB-52,303-3	3		
MB-52,303-4	4		
MB-52,303-5	5	UNREG GND	
MB-52,303-6	6	UNREG GND	
MB-52,303-7	7	GND	
MB-52,303-8	8	GND	
MB-52,303-9	9	UNREG +15V	+15
MB-52,303-10	10	UNREG +15V	
MB-52,303-11	11	REG +5V	+5V
MB-52,303-12	12	UNREG +15V	
MB-52,303-13	13	REG +5V	
MB-52,303-14	14	1/2 VD OUT	101-19A,113-19A,146-6
MB-52,303-15	15	EDIT CTL OUT	101-18A,113-18A
MB-52,303-16	16	CAPSTAN 4FG OUT	101-18B,113-18B
MB-52,303-17	17	TAPE DIRECTION OUT	101-16A,113-16A
MB-52,303-18	18	L:TC REC STOP OUT	101-15A
MB-52,303-19	19	TC STB OUT	113-15B
MB-52,303-20	20	L:TC BUILD-IN IN	113-14A
MB-52,303-21	21	TC ADDRESS 6 OUT	113-13A
MB-52,303-22	22	TC ADDRESS 5 OUT	113-13B
MB-52,303-23	23	TC ADDRESS 4 OUT	113-12A
MB-52,303-24	24	TC ADDRESS 3 OUT	113-12B
MB-52,303-25	25	TC ADDRESS 2 OUT	113-11A
MB-52,303-26	26	TC ADDRESS 1 OUT	113-11B
MB-52,303-27	27	TC ADDRESS 0 OUT	113-10A
MB-52,303-28	28	TC DATA 7 IN/OUT	113-10B
MB-52,303-29	29	TC DATA 6 IN/OUT	113-9A
MB-52,303-30	30	TC DATA 5 IN/OUT	113-9B
MB-52,303-31	31	TC DATA 4 IN/OUT	113-8A
MB-52,303-32	32	TC DATA 3 IN/OUT	113-8B
MB-52,303-33	33	TC DATA 2 IN/OUT	113-7A
MB-52,303-34	34	TC DATA 1 IN/OUT	113-7B
MB-52,303-35	35	TC DATA 0 IN/OUT	113-6A
MB-52,303-36	36	SERIAL DATA-5 OUT	113-6B
MB-52,303-37	37	SERIAL DATA-4 OUT	113-5A
MB-52,303-38	38	SERIAL DATA-1 IN	114-30B
MB-52,303-39	39	L:TC EXIST IN	113-4A
MB-52,303-40	40	SYS CK-3 OUT	114-29B
MB-52,303-41	41	STB CK-3 OUT	113-3A
MB-52,303-42	42	L:REC CONT OUT	113-2A,117-15A
MB-52,303-43	43	L:POWER RESET OUT	113-1A,118-3
MB-52,303-44	44	DWP IN	113-15A
MB-52,303-45	45	1st FIELD PULSE IN	114-28B
MB-52,303-46	46	L:TC F MODE IN	101-10A
MB-52,303-47	47	CFP-2 OUT	106-20A
MB-52,303-48	48	CFP-1 OUT	106-18A
MB-52,303-49	49	CFP-1(TC) OUT	102-28B
MB-52,303-50	50	CFP-2(TC) OUT	102-29B

CN116

MB-52,301-6A	1A	GND (DRUM)	102-17A
SW-6,631-2	2A	L:NORMAL/H:EDIT IN	114-24B
	3A	GND	
CAPSTAN MOTOR	4A	CAPSTAN F/R CONTROL	102-17B
MB-52,310-25A	5A	CTL HEAD(G)	102-21A
MB-52,310-24A	6A	CTL HEAD(X)	102-23A
BC-5,401-3	7A	SHAPED PHASE PG OUT	102-27A
BC-5,401-1	8A	SHAPED SPEED PG(A)OUT	102-29A
BF-7,610-1	9A	GND	
BC-5,402-1	10A	GND	
BC-5,402-9	11A	C SW'ING PULSE IN(X)	103-15A
MB-50,206-24B	12A	L:VIDEO EE IN	103-13A,105-22A
	13A		
DU-53,882-5	14A	T-REEL FG1 IN	101-4B
DU-53,882-6	15A	GND (T-REEL)	101-2B
SW-7,623-6	16A	L:DT SELECT-VAR IN	113-1B
DU-53,882-1	17A	S-REEL FG2 IN	101-4A
HE-5,831-3	18A	TAPE ROLL PULSE IN(X)	101-7B
MB-50,206-21B	19A	L:AUDIO NR ON OUT	132-3
RD-2,931-10	20A	UNREG +15V	+15
MB-52,310-5A	1A	DRUM ERROR OUT	102-18A
MB-52,310-4A	2B	Vcc (DRUM)	102-19A
CAPSTAN MOTOR	3B	Vcc (CAPSTAN)	102-19B
CAPSTAN MOTOR	4B	CAPSTAN ERROR OUT	102-18B
CAPSTAN MOTOR	5B	GND (CAPSTAN)	102-16B
MB-52,310-24B	6B	CTL HEAD(Y)	102-22A
BC-5,401-4	7B	GND (PG)	102-26A
BC-5,401-2	8B	SHAPED SPEED PG(B)OUT	102-28A
SW-7,621-5	9B	L:U-BIT SELECT IN	114-22A
RD-2,931-9	10B	REG +5V	+5V
BC-5,402-4	11B	REG +5V	
BC-5,402-10	12B	C SW'ING PULSE IN(G)	103-14A
MB-50,206-7A	13B	RF METER OUT	103-10B
DU-53,882-8	14B	Vcc (REEL FG)	101-5B
DU-53,882-4	15B	T-REEL FG2 IN	101-3B
SW-7,623-8	16B	L:DT SELECT-SEARCH IN	113-2B
DU-53,882-3	17B	GND (S-REEL)	101-3A
DU-53,882-2	18B	S-REEL FG1 IN	101-5A
HE-5,831-4	19B	TAPE ROLL PULSE IN(G)	101-7A
RD-2,931-12	20B	UNREG -15V	-15V

SY-4

CN114

A			B	
	GND	1	GND	
		2		
		3		
		4		
		5		
		6		
118-15	INT SCAN LINE 1 OUT	7	INT SCAN LINE 2 OUT	118-16
118-14	INT SCAN LINE 0 OUT	8	INT SCAN LINE 3 OUT	118-17
118-12	INT RETURN LINE 7 IN	9	INT A0 OUT	118-19
118-11	INT RETURN LINE 6 IN	10	INT A1 OUT	118-20
118-10	INT RETURN LINE 5 IN	11	INT A2 OUT	118-21
118-9	INT RETURN LINE 4 IN	12	INT A3 OUT	118-22
118-8	INT RETURN LINE 3 IN	13	INT B0 OUT	118-23
118-7	INT RETURN LINE 2 IN	14	INT B1 OUT	118-24
118-6	INT RETURN LINE 1 IN	15	INT B2 OUT	118-25
118-5	INT RETURN LINE 0 IN	16	INT B3 OUT	118-26
118-27	INT KEY MUTE OUT	17	INT BLANK DISPLAY OUT	118-28
117-6A	L:TC PRESET BUTTON IN	18	L:VTR CONT-EXT IN	132-6
117-7A	L:TC ADVANCE BUTTON	19	H:CTL/L:TC IN	117-7B
117-8A	L:TC SHIFT BUTTON IN	20	L:REMOTE-2 SELECT IN	117-8B
117-9A	L:TC HOLD BUTTON IN	21	L:REMOTE-1 SELECT IN	117-9B
116-9B	L:U-BIT SELECT IN	22	AUTO OFF LAMP OUT	117-10B
117-11B	TC HOLD LAMP OUT	23	HOURS METER (+) OUT	131-1
147-6,117-11A	STB CK-1 OUT	24	L:NORMAL/H:EDIT IN	116-2A
147-7,117-12B	SYS CK-1 OUT	25	L:NORMAL/H:BID OUT	104-7B,106-7A,145-5
117-13B	SERIAL DATA-6 OUT	26	L:FFWD CONT OUT	104-17A
117-13A	SERIAL DATA-7 OUT	27	L:COMB FILTER OFF OUT	106-27B
117-14B	SERIAL DATA-8 OUT	28	1st FIELD PULSE IN	115-45
117-14A	L:BIAS OSC ON OUT	29	SYS CK-3 OUT	115-40
117-15B	L:AUDIO MUTE OUT	30	SERIAL DATA-1 IN	115-38

CN113

A			B	
118-3 115-43	L:POWER RESET OUT	1	L:DT SELECT-VAR IN	116-16A
117-15A,115-42	L:REC CONT OUT	2	L:DT SELECT-SEARCH IN	116-16B
115-41	STB CK-3 OUT	3	SERIAL DATA-3 IN	146-12
115-39	L:TC EXIST IN	4	SERIAL DATA-9 OUT	146-11
115-37	SERIAL DATA-4 OUT	5	SERIAL DATA-10 OUT	101-24A
115-35	TC DATA 0 IN/OUT	6	SERIAL DATA-5 OUT	115-36
115-33	TC DATA 2 IN/OUT	7	TC DATA 1 IN/OUT	115-36
115-31	TC DATA 4 IN/OUT	8	TC DATA 3 IN/OUT	115-34
115-29	TC DATA 6 IN/OUT	9	TC DATA 5 IN/OUT	115-32
115-27	TC ADDRESS 0 OUT	10	TC DATA 7 IN/OUT	115-30
115-25	TC ADDRESS 2 OUT	11	TC ADDRESS 1 OUT	115-28
115-23	TC ADDRESS 4 OUT	12	TC ADDRESS 3 OUT	115-26
115-21	TC ADDRESS 6 OUT	13	TC ADDRESS 5 OUT	115-24
115-20	L:TC BUILD-IN IN	14	H:CHROMA MUTE OUT	103-10A,105-8A
115-44	DWP IN	15	TC STB OUT	115-19
101-16A,115-17	TAPE DIRECTION IN	16	S-REEL 4FG IN	101-16B
101-17A	TAPE ROLLER PULSE IN	17	T-REEL 4FG IN	101-17B
101-18A,115-15	EDIT CTL IN	18	CAPSTAN 4FG IN	101-18B,115-16
146-6,101-19A,115-14	1/2 VD IN	19	SEARCH FREQ OUT	101-19B
101-20A	SERIAL DATA-3 OUT	20	SERIAL DATA-2 IN	101-20B
101-21A	SERIAL DATA-2 OUT	21	STB CK-2 OUT	101-21B
101-22A	SERIAL DATA-1 OUT	22	SYS CK-2 OUT	101-22B
101-23A	SYNCHRONIZE OUT	23	L:8H ADVANCE OFF OUT	121-8A
146-10	DT UNREADY IN	24	CFP-1 IN	106-19A
123-5	UNREG +9V IN	25	UNREG +9V IN	123-5
+5V	REG +5V IN	26	REG +5V IN	+5V
+12V	REG +12V IN	27	REG +12V IN	+12V
		28		
133-3	H:PLAYER NOR FWD OUT	29	L:MODE-EDIT OUT	133-8,141-7
	GND	30	GND	

SV-55

CN102

A			B	
	GND	1	GND	
		2		
-15V	UNREG -15V IN	3	UNREG -15V IN	-15V
-12V	REG -12V IN	4	REG -12V IN	-12V
-5V	REG -5V IN	5	REG -5V IN	-5V
117-1B	GND (TRACKING CONT)	6		
117-1A	TRACKING CONTROL IN	7	GND	
117-2B	Vcc (TRACKING CONT)	8	Vcc (CAPSTAN FG)	117-2A
		9	CAPSTAN FG(B)IN	117-3B
		10	CAPSTAN FG(A)IN	117-3A
117-4A	GND (DRUM PG)	11	GND (CAPSTAN FG)	117-4B
117-5B	DRUM PHASE PG IN	12	GND	
117-5A	DRUM SPEED PG(B)IN	13	GND	
117-6B	DRUM SPEED PG(A)IN	14	GND	
123-6	UNREG GND (CAPSTAN)	15	UNREG GND (CAPSTAN)	123-6
123-6	UNREG GND (DRUM)	16	GND (CAPSTAN)	116-5B
116-1A	GND (DRUM)	17	CAPSTAN F/R CONTROL	116-4A
116-1B	DRUM ERROR OUT	18	CAPSTAN ERROR OUT	116-4B
116-2B	Vcc (DRUM)	19	Vcc (CAPSTAN)	116-3B
		20		
116-5A	CTL HEAD(G)	21	DT SW'ING PULSE OUT	147-8
116-6B	CTL HEAD(Y)	22	GND	
116-6A	CTL HEAD(X)	23	GND	
GND		24	Y SW'ING PULSE OUT(G)	104-15A
GND		25	Y SW'ING PULSE OUT(X)	104-16A,147-9
116-7B	GND (PG)	26	DEMOD'ED Y IN(G)	104-26B,143-3
116-7A	SHAPED PHASE PG OUT	27	DEMOD'ED Y IN(X)	104-27B,143-6
116-8B	SHAPED SPEED PG(B)OUT	28	CFP-1(TC) IN	115-49
116-8A	SHAPED SPEED PG(A)OUT	29	CFP-2(TC) IN	115-50
	L:SERVO LOCK	30	SV SYNC IN(X)	133-7

CN101

A			B	
146-8	SHAPED CAP FG(A) OUT	1	SHAPED CTL OUT	146-7
146-9	SHAPED CAP FG(B) OUT	2	GND (T-REEL)	116-15A
116-17B	GND (S-REEL)	3	T-REEL FG2 IN	116-15B
116-17A	S-REEL FG2 IN	4	T-REEL FG1 IN	116-14A
116-18B	S-REEL FG1 IN	5	Vcc (REEL FG)	116-14B
GND		6	GND	
116-19B	TAPE ROLL PULSE IN(G)	7	TAPE ROLL PULSE IN(X)	116-18A
125-1	GND (TENSION SENSOR)	8	TENSION SENSOR(+) IN	125-2
125-4	Vcc (TENSION SENSOR)	9	TENSION SENSOR(-) IN	125-3
115-46	L:TC F MODE IN	10	H:SHIFT OFF OUT	106-12B,144-1
		11	GND (REEL)	138-1
138-3	S-REEL CURRENT IN	12	T-REEL CURRENT IN	138-2
138-5	S-REEL ERROR OUT	13	T-REEL ERROR OUT	138-4
138-7	S-REEL DRIVE OUT	14	T-REEL DRIVE OUT	138-6
115-18	L:TC REC STOP OUT	15	F PULSE IN	105-19A,141-8
115-17,113-16A	TAPE DIRECTION OUT	16	S-REEL 4FG OUT	113-16B
113-17A	TAPE ROLLER PULSE OUT	17	T-REEL 4FG OUT	113-17B
115-15,113-18A	EDIT CTL OUT	18	CAPSTAN 4FG OUT	113-18B,115-16
146-6,115-14,113-19A	1/2 VD OUT	19	SEARCH FREQ IN	113-19B
113-20A	SERIAL DATA-3 IN	20	SERIAL DATA-2 OUT	113-20B
113-21A	SERIAL DATA-2 IN	21	STB CK-2 IN	113-21B
113-22A	SERIAL DATA-1 IN	22	SYS CK-2 IN	113-22B
113-23A	SYNCHRONIZE IN	23	L:8H ADVANCE OFF IN	121-4B,133-4
113-5B	SERIAL DATA-10 IN	24	H:VIDEO DET IN	
		25		
+5V	REG +5V IN	26	REG +5V IN	+5V
+12V	REG +12V IN	27	REG +12V IN	+12V
+15V	UNREG +15V IN	28	UNREG +15V IN	+15V
		29		
	GND	30	GND	

YC-14

CN104

	A		B		
	GND	1	GND		
		2			
		3			
-12V	REG -12V IN	4	REG -12V IN	-12V	
-5V	(REG -5V IN)	5	(REG -5V IN)	-5V	
		6			
129-3	Y RF CH-B IN(G)	7	L:NORMAL/H:BID IN	114-25B,106-7A,145-5	
129-4	Y RF CH-B IN(X)	8			
129-5	Y RF CH-A IN(G)	9			
129-6	Y RF CH-A IN(X)	10			
		11			
		12			
117-12A	L:CTDM IN	13			
		14			
102-24B	Y SW'ING PULSE IN(G)	15	C DO DET PULSE OUT(G)	106-15A	
147-9,102-25B	Y SW'ING PULSE IN(X)	16	C DO DET PULSE OUT(X)	106-16A,144-6	
114-26B	L:FFWD CONTROL IN	17			
		18			
		19			
		20	DEMOD'ED C OUT(G)	106-20B	
		21	DEMOD'ED C OUT(X)	106-21B	
		22			
		23			
		24	Y DO DET PULSE OUT(G)	106-24B	
		25	Y DO DET PULSE OUT(X)	106-25B,143-5,147-10	
		26	DEMOD'ED Y OUT(G)	102-26B,143-3	
128-1	Y REC RF OUT(G)	27	DEMOD'ED Y OUT(X)	102-27B,143-6	
128-2	Y REC RF OUT(X)	28			
128-3	C REC RF OUT(G)	29	ADVANCED Y OUT(X)	143-8	
128-4	C REC RF OUT(X)	30	ADVANCED Y OUT(G)	143-10	

CN103

	A		B		
127-1	Y IN (G)	1			
127-2	Y IN (X)	2			
127-3	C IN (G)	3	TBC Y IN(X)	141-6,105-7B	
127-4	C IN (X)	4	TBC Y IN(G)	141-5,105-6B	
127-5	Y DO IN (G)	5			
127-6	Y DO IN (X)	6			
127-7	C DO IN (G)	7			
127-8	C DO IN (X)	8	RF ENVELOPE OUT (DT)	146-8	
		9			
105-8A,113-14B	H:CHROMA MUTE IN	10	RF METER OUT	116-13B	
		11			
		12			
105-22A,116-12A	L:VIDEO EE IN	13	INV REF SYNC IN(X)	105-23B	
116-12B	C SW'ING PULSE IN(G)	14	INV REF SYNC IN(G)	105-24B	
116-11A	C SW'ING PULSE IN(X)	15			
		16	L:DUB/H:COMPONENT IN	121-15B,105-16B	
126-1	C RF CH-B IN(G)	17			
126-2	C RF CH-B IN(X)	18			
126-3	C RF CH-A IN(G)	19			
126-4	C RF CH-A IN(X)	20			
		21			
121-5A	U-DUB Y OUT(X)	22			
121-5B	U-DUB Y OUT(G)	23	DUB C OUT(X)	121-6B	
121-7B	DUB Y OUT(X)	24	DUB C OUT(G)	121-6A	
121-7A	DUB Y OUT(G)	25			
+5V	REG +5V IN	26	REG +5V IN	+5V	
+12V	REG +12V IN	27	REG +12V IN	+12V	
		28			
		29			
	GND	30	GND		

EN-21

CN106

	A		B		
	GND	1	GND		
		2			
		3			
-12V	REG -12V IN	4	REG -12V IN	-12V	
-5V	REG -5V IN	5	REG -5V IN	-5V	
		6			
,104-7B,114-25B 145-5	L:NORMAL/H:BID IN	7			
		8			
		9			
145-10	L:C CLAMP INHIBIT IN	10	L:C CLAMP INHIBIT IN	145-10	
		11			
144-3	FR OFF(N)/ LV(P) IN	12	H:SHIFT OFF IN	101-10B,144-1	
		13	SPARE EN CK-1 IN	144-2	
		14			
104-15B	C DO DET PULSE IN(G)	15	1st FIELD PULSE IN	142-9	
144-6,104-16B	C DO DET PULSE IN(X)	16			
113-24B	CFP-1 OUT	17			
115-48	CFP-1 OUT	18	DELAYED TDM-C OUT(X)	144-9	
		19	DELAYED TDM-C OUT(G)	144-10	
115-47	CFP-2 OUT	20	DEMOD'ED C IN(G)	104-20B	
		21	DEMOD'ED C IN(X)	104-21B	
		22	CR DO IN(G)		
143-1	FIELD O/E IN	23	CR DO IN(X)	143-2	
		24	Y DO DET PULSE IN(G)	104-24B	
143-4	H:IN PHASE OUT	25	Y DO DET PULSE IN(X)	104-25B,143-5, 147-10	
		26			
		27	L:COMB FILTER OFF IN	114-27B	
132-2	HUE CONTROL IN	28	R-Y/B-Y OUT(G)	143-7	
		29	R-Y/B-Y OUT(X)	143-9	
	GND	30	GND		

CN105

	A		B		
142-3	C BLKG IN	1	BF IN	142-1	
142-4	R ZERO IN	2	TBC R-Y IN (G)	141-1	
	GND	3	TBC R-Y IN (X)	141-2	
142-5	+V/-V IN	4	TBC B-Y IN (G)	141-3	
		5	TBC B-Y IN (X)	141-4	
132-1	SC PHASE CONTROL IN	6	TBC Y IN (G)	141-5,103-4B	
		7	TBC Y IN (X)	141-6,103-3B	
103-10A,113-14B	H:CHROMA MUTE IN	8	H:VIDEO MUTE IN		
	GND	9	GND		
142-6	4fsc(-) OUT	10	4fsc(+) OUT	142-2	
	GND	11	GND		
142-7	H:INT/L:EXT IN	12	BG PULSE IN(X)	142-10	
121-9B	TV VIDEO OUT(G)	13	REF SYNC IN	142-8	
121-10A	TV VIDEO OUT(X)	14	REF VIDEO IN(G)	133-2	
121-10B	VIDEO OUT-2 (G)	15	REF VIDEO IN(X)	133-1	
121-11A	VIDEO OUT-2 (X)	16	L:DUB/H:COMPONENT IN	121-15B,103-16B	
121-11B	VIDEO OUT-1 (G)	17	B-Y/C-DO OUT(X)	121-15A	
121-12A	VIDEO OUT-1 (X)	18	B-Y/C-DO OUT(G)	121-14B	
101-15B,141-8	F PULSE IN	19	R-Y/Y-DO OUT(X)	121-14A	
121-12B	U-DUB CHROMA OUT(X)	20	R-Y/Y-DO OUT(G)	121-13B	
121-13A	U-DUB CHROMA OUT(G)	21	VIDEO IN (LINE)(X)	139-2	
103-13A,116-12A	L:VIDEO EE IN	22	VIDEO IN (LINE)(G)	139-3	
131-2	H:BY-PASS ON IN	23	INV REF SYNC OUT(X)	103-13B	
121-17B	U-F OUT	24	INV REF SYNC OUT(G)	103-14B	
		25			
+5V	REG +5V IN	26	REG +5V IN	+5V	
+12V	REG +12V IN	27	REG +12V IN	+12V	
		28			
	GND	29			
		30	GND		

CN142

105-1B	BF IN	1	MB-73,152-1
105-10B	4fsc (+) OUT	2	MB-73,152-2
105-1A	C BLKG IN	3	MB-73,152-3
105-2A	R ZERO IN	4	MB-73,152-4
105-4A	+V/-V IN	5	MB-73,152-5
105-10A	4fsc (-) OUT	6	MB-73,152-6
105-12A	H:INT/L:EXT IN	7	MB-73,152-7
105-13B	REF SYNC IN	8	MB-73,152-8
105-15B	1st FIELD PULSE IN	9	MB-73,152-9
105-12B	BG PULSE IN	10	MB-73,152-10

CN143

106-23A	FIELD O/E IN	1	MB-73,153-10
106-23B	CR DO IN(X)	2	MB-73,153-9
104-26B,102-26B	DEMOD'ED Y OUT(G)	3	MB-73,153-8
106-25A	H:IN PHASE OUT	4	MB-73,153-7
104-25B,106-25B,147-10	Y DO DET PULSE OUT(X)	5	MB-73,153-6
104-27B,102-27B	DEMOD'ED Y OUT(X)	6	MB-73,153-5
106-28B	R-Y/B-Y OUT(G)	7	MB-73,153-4
104-29B	ADVANCED Y OUT(X)	8	MB-73,153-3
106-29B	R-Y/B-Y OUT(X)	9	MB-73,153-2
104-30B	ADVANCED Y OUT(G)	10	MB-73,153-1

CN144

101-10B,106-12B	H:SHIFT OFF OUT	1	MB-73,154-10
106-13B	SPARE EN CK-1 IN	2	MB-73,154-9
106-12A	FR OFF(N)/ LV (P) IN	3	MB-73,154-8
		4	MB-73,154-7
		5	MB-73,154-6
104-16B,106-16A	C DO DET PULSE OUT(X)	6	MB-73,154-5
		7	MB-73,154-4
139-1	L:Y-R,B SELECT OUT	8	MB-73,154-3
106-18B	DELAYED TDM-C OUT(X)	9	MB-73,154-2
106-19B	DELAYED TDM-C OUT(G)	10	MB-73,154-1

CN145

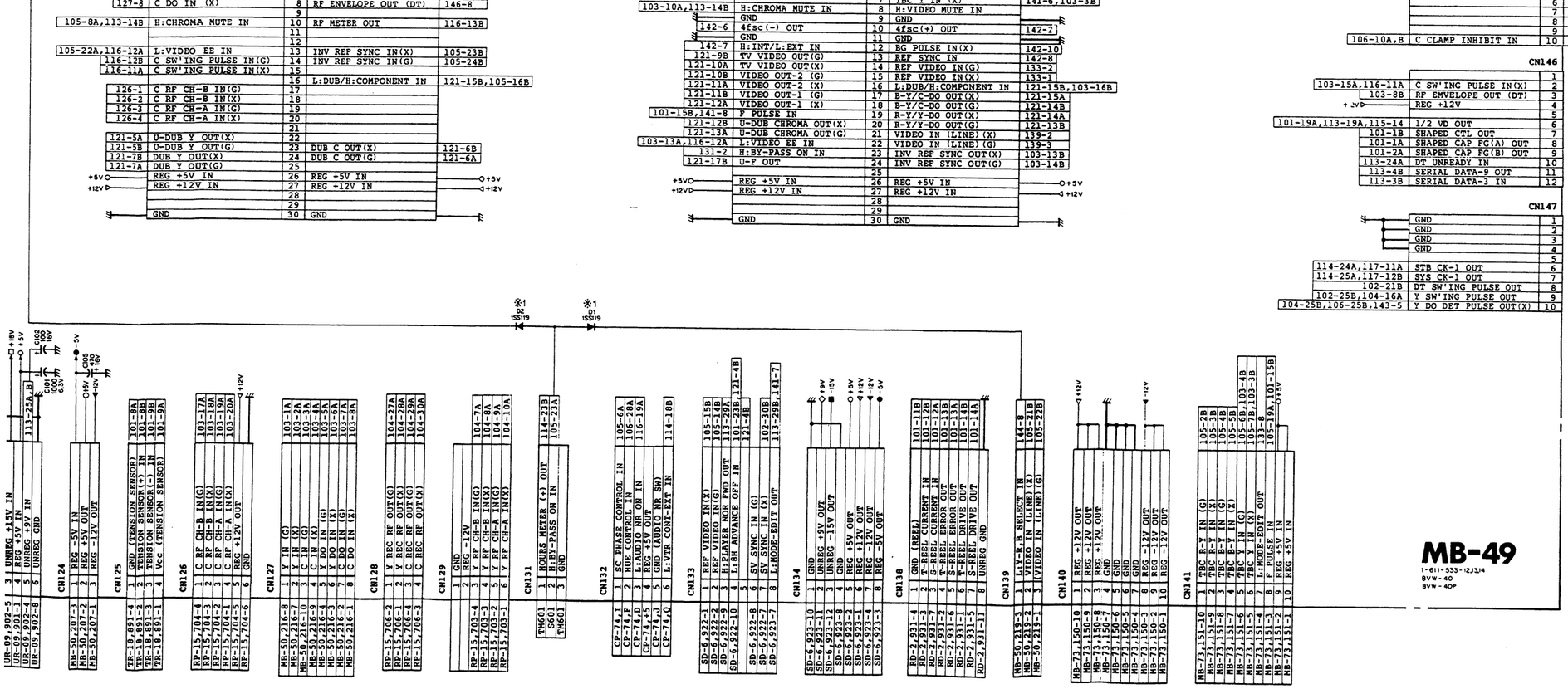
-12V	REG -12V	1	MB-73,155-10
	REG -12V	2	MB-73,155-9
	REG -12V	3	MB-73,155-8
		4	MB-73,155-7
114-25B,104-7B,106-7A	L:NORMAL/H:BID IN	5	MB-73,155-6
		6	MB-73,155-5
		7	MB-73,155-4
		8	MB-73,155-3
		9	MB-73,155-2
106-10A,B	C CLAMP INHIBIT IN	10	MB-73,155-1

CN146

		1	
103-15A,116-11A	C SW'ING PULSE IN(X)	2	
103-8B	RF ENVELOPE OUT (DT)	3	
+5V	REG +12V	4	
		5	
101-19A,113-19A,115-14	1/2 VD OUT	6	
101-1B	SHAPED CTL OUT	7	
101-1A	SHAPED CAP FG(A) OUT	8	
101-2A	SHAPED CAP FG(B) OUT	9	
113-24A	DT UNREADY IN	10	
113-4B	SERIAL DATA-9 OUT	11	
113-3B	SERIAL DATA-3 IN	12	

CN147

GND	1	
GND	2	
GND	3	
GND	4	
	5	
114-24A,117-11A	STB CK-1 OUT	6
114-25A,117-12B	SYS CK-1 OUT	7
102-21B	DT SW'ING PULSE OUT	8
102-25B,104-16A	Y SW'ING PULSE OUT	9
104-25B,106-25B,143-5	Y DO DET PULSE OUT(X)	10



NOTE:

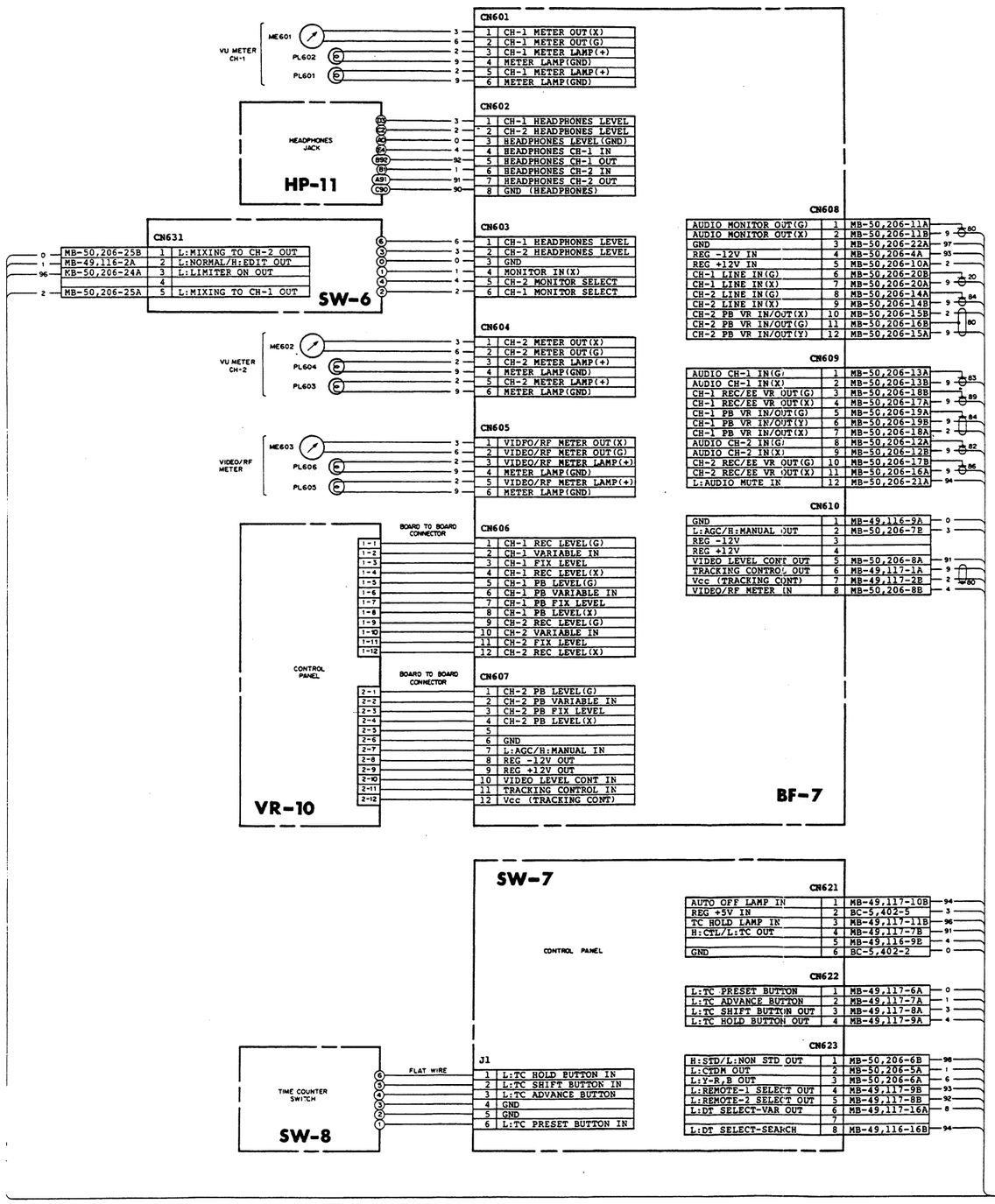
MARK	CHANGE INFORMATION		SERIAL NO.
※1	D1 1SS119 ADDED		UC: 10931 ~
	D2 1SS119 ADDED		J: 10396 ~
			P: 10431 ~

MB-49

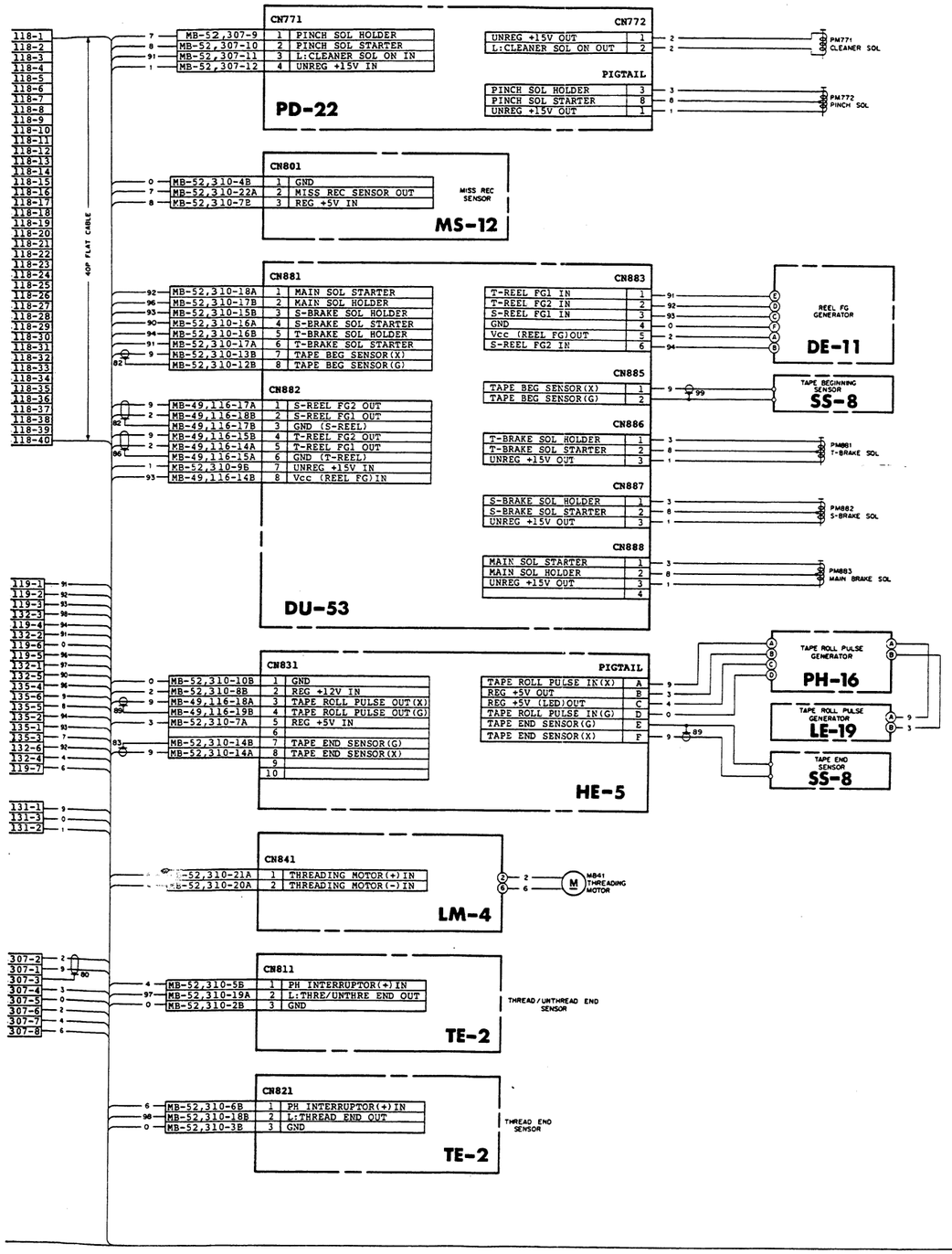
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8VW-40
8VW-40P

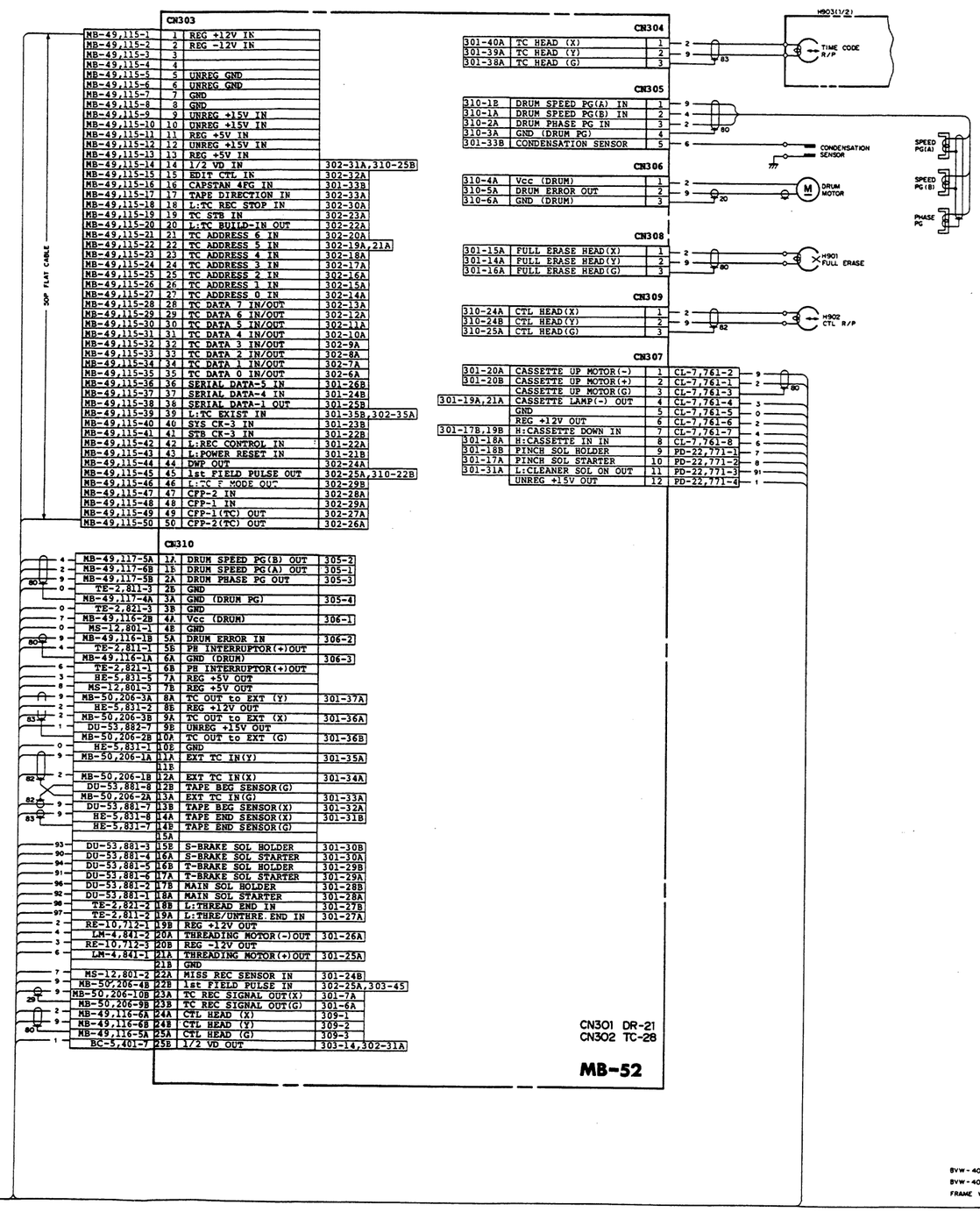
FRAME (1/4) FRAME (1/4)

FRAME WIRING (1/4)



FRAME (1/4) FRAME (1/4)





8VW-40
8VW-40P
FRAME WIRING (1/4)

FRAME WIRING (2/4)

FRAME (2/4) FRAME (2/4)

M903 (2/2)

AUDIO CH-1 R/P

AUDIO CH-2 R/P

AUDIO CH-1 ERASE

AUDIO CH-2 ERASE

TIME CODE ERASE

CN214

1	AUDIO CH-1 HEAD(X)	205-37A
2	AUDIO CH-1 HEAD(Y)	205-36A
3	AUDIO CH-1 HEAD(G)	205-35A
4	AUDIO CH-2 HEAD(X)	205-34A
5	AUDIO CH-2 HEAD(Y)	205-33A
6	AUDIO CH-2 HEAD(G)	205-32A

CN215

1	CH-1 ERASE HEAD(G)	205-17A
2	CH-1 ERASE HEAD(Y)	205-16A
3	CH-1 ERASE HEAD(X)	205-15A
4	CH-2 ERASE HEAD(G)	205-13A
5	CH-2 ERASE HEAD(Y)	205-12A
6	CH-2 ERASE HEAD(X)	205-11A
7	TC ERASE HEAD(G)	205-9A
8	TC ERASE HEAD(Y)	205-8A
9	TC ERASE HEAD(X)	205-7A
10		

CN206

MB-52.310-11A	1A	EXT TC IN(Y)	208-2
MB-52,310-12A	1B	EXT TC IN(X)	208-1
MB-52,310-13A	2A	EXT TC IN(G)	208-3
MB-52,310-10A	2B	TC OUT to EXT(G)	208-6
MB-52,310-8A	3A	TC OUT to EXT(Y)	208-5
MB-52,310-9A	3B	TC OUT to EXT(X)	208-4
BF-7,608-4	4A	REG -12V OUT	
MB-52,310-22B	4B	1st FIELD PULSE OUT	202-32B
SW-7,623-2	5A	L:CTDM IN	201-13B,206-5B,217-3
MB-49,117-12A	5B	L:CTDM OUT	201-13B,206-5A,217-3
SW-7,623-3	6A	L:Y-R,B IN	201-23B,210-10B,219-3
SW-7,623-1	6B	H:STD/L:NON STD IN	202-26B,210-10A,11A
MB-49,116-13B	7A	RF METER IN	203-34B
BF-7,610-2	7B	L:AGC/H:MANUAL IN	203-35B
BF-7,610-5	8A	VIDEO CONTROL IN	203-36B
BF-7,610-8	8B	VIDEO/RF METER OUT	203-37B
	9A		
MB-52,310-23B	9B	TC REC SIGNAL(G)	205-15B
BF-7,608-5	10A	REG +12V OUT	
MB-52,310-23A	10B	TC REC SIGNAL(X)	205-16B
BF-7,608-1	11A	AUDIO MONITOR IN(G)	210-6B
BF-7,608-2	11B	AUDIO MONITOR IN(X)	210-7B
BF-7,607-8	12A	AUDIO CH-2 OUT(G)	210-5B
BF-7,609-9	12B	AUDIO CH-2 OUT(X)	210-5A
BF-7,609-1	13A	AUDIO CH-1 OUT(G)	210-4B
BF-7,609-2	13B	AUDIO CH-1 OUT(X)	210-4A
BF-7,608-8	14A	CH-2 LINE OUT(G)	204-8A,210-2A
BF-7,608-9	14B	CH-2 LINE OUT(X)	204-7A,210-2B
BF-7,608-12	15A	CH-2 PB VR IN/OUT(Y)	204-11A
BF-7,608-10	15B	CH-2 PB VR IN/OUT(X)	204-10A
BF-7,609-11	16A	CH-2 REC/EE VR IN(X)	204-14A
BF-7,608-11	16B	CH-2 PB VR IN/OUT(G)	204-12A
BF-7,609-4	17A	CH-1 REC/EE VR IN(X)	204-30A
BF-7,609-10	17B	CH-2 REC/EE VR IN(G)	204-15A
BF-7,609-7	18A	CH-1 PB VR IN/OUT(X)	204-33A
BF-7,609-3	18B	CH-1 REC/EE VR IN(G)	204-31A
BF-7,609-5	19A	CH-1 PB VR IN/OUT(G)	204-35A
BF-7,609-6	19B	CH-1 PB VR IN/OUT(Y)	204-34A
BF-7,608-7	20A	CH-1 LINE OUT(X)	204-37A,210-3B
BF-7,608-6	20B	CH-1 LINE OUT(G)	204-38A,210-3A
BF-7,609-12	21A	L:AUDIO MUTE IN	204-39B,205-39B,213-6, 206-23B
MB-49,116-19A	21B	L:AUDIO NR ON IN	204-16A
BF-7,608-3	22A	GND	
	22B	GND	
MB-49,117-14A	23A	L:BIAS OSC ON IN	205-6B
MB-49,117-15B	23B	L:AUDIO MUTE IN	206-21A,204-39B,205-39B, 213-6
SW-6,631-3	24A	L:LIMITER ON IN	213-8
MB-49,116-12A	24B	L:VIDEO EE OUT	213-7,203-33B
SW-6,631-5	25A	L:MIXING TO CH-1 IN	213-10
SW-6,631-1	25B	L:MIXING TO CH-2 IN	213-9

CN207

MB-49,124-3	1	REG -12V IN
MB-49,124-2	2	REG +5V IN
MB-49,124-1	3	REG -5V OUT

CN208

CN PANEL,566-2	1	EXT TC IN (X)	206-1B
CN PANEL,566-3	2	EXT TC IN (Y)	206-1A
CN PANEL,566-1	3	EXT TC IN (G)	206-2A
CN PANEL,567-2	4	TC OUT to EXT(X)	206-3B
CN PANEL,567-3	5	TC OUT to EXT(Y)	206-3A
CN PANEL,567-1	6	TC OUT to EXT(G)	206-2B

CN209

UR-09,902-1	1	REG +12V IN
UR-09,902-6	2	GND
UR-09,901-8	3	REG -5V IN

CN201 CC-15
CN202 DEC-8
CN203 DEC-7(NTSC)/DEC-9(PAL)
CN204 AU-45
CN205 AU-46

MB-50

CN210

	GND	1A	CP-61,522-7
	GND	1B	CP-61,528-4
204-8A,206-14A	CH-2 LINE OUT(G)	2A	CP-61,526-1
204-7A,206-14B	CH-2 LINE OUT(X)	2B	CP-61,526-3
204-38A,206-20B	CH-1 LINE OUT(G)	3A	CP-61,527-1
204-37B,206-20A	CH-1 LINE OUT(X)	3B	CP-61,527-3
206-13B	AUDIO CH-1 OUT(X)	4A	CP-61,522-4
206-13A	AUDIO CH-1 OUT(G)	4B	CP-61,522-5
206-12B	AUDIO CH-2 OUT(X)	5A	CP-61,522-3
206-12A	AUDIO CH-2 OUT(G)	5B	CP-61,522-2
	REG -12V OUT	6A	CP-61,522-6
206-11A	AUDIO MONITOR OUT(G)	6B	CP-61,525-1
	GND	7A	
206-11B	AUDIO MONITOR OUT(X)	7B	CP-61,525-3
	REG +12V OUT	8A	
	REG +12V OUT	8B	CP-61,522-1
203-9A,219-1	VIDEO IN (LINE)(G)	9A	CP-62,541-5
203-8A,219-2	VIDEO IN (LINE)(X)	9B	CP-62,541-4
206-6B,202-26B	H:STD/L:NON STD OUT	10A	
201-23B,206-6A	L:Y-R,B	10B	
206-6B,202-26B	H:STD/L:NON STD OUT	11A	
		11B	
201-26B	DUB Y IN(X)	12A	CN PANEL,557-1
201-27B	DUB Y IN(G)	12B	CN PANEL,557-2
201-10B	DUB R-Y/B-Y IN(X)	13A	CN PANEL,557-7
201-11B	DUB R-Y/B-Y IN(G)	13B	CN PANEL,557-8
201-11A	DUB B-Y/C DO IN(X)	14A	CN PANEL,557-5
201-10A	DUB B-Y/C DO IN(G)	14B	CN PANEL,557-6
201-14A	DUB R-Y/Y DO IN(X)	15A	CN PANEL,557-3
201-13A	DUB R-Y/Y DO IN(G)	15B	CN PANEL,557-4

CN211

	GND	1	BC-6,454-1
	GND	2	BC-6,454-2
	REG +5V OUT	3	BC-6,454-3
	REG +5V OUT	4	BC-6,454-4
		5	BC-6,454-5
204-9B	L:CH-2 LIMITER ON IN	6	BC-6,454-6
203-13B	L:MIX TO CH-2 REC/EE	7	BC-6,454-7
204-17A	L:CH-2 REC/EE IN	8	BC-6,454-8
204-32B	L:CH-1 REC/EE IN	9	BC-6,454-9
204-35B	L:CH-1 LIMITER ON IN	10	BC-6,454-10

CN212

204-36B	L:MIX TO CH-1 REC/EE	1	BC-6,453-1
205-5B	FAST IN	2	BC-6,453-2
204-20A,205-7B	L:CH-2 BIAS ON IN	3	BC-6,453-3
204-26A,205-8B	L:CH-1 BIAS ON IN	4	BC-6,453-4
205-9B	L:CH-2 ERASE ON IN	5	BC-6,453-5
205-10B	L:CH-1 ERASE ON IN	6	BC-6,453-6
205-13B	CH-2 RELAY ON	7	BC-6,453-7
205-14B	CH-1 RELAY ON	8	BC-6,453-8
205-17B	L:TC ERASE ON IN	9	BC-6,453-9
205-18B	TC RELAY ON	10	BC-6,453-10

CN213

204-16B,205-18A	L:TC REC IN	1	BC-6,452-1
205-22B	L:AUDIO CH-2 REC IN	2	BC-6,452-2
204-23A,205-25B	L:CH-2 PB CONTROL IN	3	BC-6,452-3
205-28B	L:AUDIO CH-1 REC IN	4	BC-6,452-4
204-29B,205-27B	L:CH-1 PB CONTROL IN	5	BC-6,452-5
206-21A,23B,204-39B,205-39B	L:AUDIO MUTE IN	6	BC-6,452-6
203-33B,206-24B	L:VIDFO EE IN	7	BC-6,452-7
206-24A	L:LIMITER ON OUT	8	BC-6,452-8
206-25B	L:MIXING TO CH-2 OUT	9	BC-6,452-9
206-25A	L:MIXING TO CH-1 OUT	10	BC-6,452-10

CN216

201-35A	C DO OUT(X)	1	MB-49,127-8
201-34A	C DO OUT(G)	2	MB-49,127-7
201-32A	Y DO OUT(X)	3	MB-49,127-6
201-31A	Y DO OUT(G)	4	MB-49,127-5
		5	
		6	
201-28A	Y OUT(X)	7	MB-49,127-2
201-27A	Y OUT(G)	8	MB-49,127-1
201-25A	R-Y/B-Y OUT(X)	9	MB-49,127-4
201-24A	R-Y/B-Y OUT(G)	10	MB-49,127-3

CN217

201-18B	C-C SYNC OUT(X)	1	SD-6,922-5
201-17B	C-C SYNC OUT(G)	2	SD-6,922-6
206-5A,B,201-13B	L:CTDM OUT	3	SD-6,922-9

CN218

REG +12V OUT	1	
GND	2	
REG -12V OUT	3	

CN219

210-9A,203-9A	VIDEO IN(LINE) OUT(G)	1	MB-49,139-3
210-8A,203-9B	VIDEO IN(LINE) OUT(G)	2	MB-49,139-2
206-6A,201-23B,210-10B	L:Y-R,B OUT	3	MB-49,139-1

CN401

SHAPED SPEED PG(A)IN	1	MB-49,11	
SHAPED SPEED PG(B)IN	2	MB-49,11	
SHAPED PHASE PG IN	3	MB-49,11	
GND (PG)	4	MB-49,11	
	5		
	6		
1/2 VD IN	7	MB-52,31	
1/2 VD OUT	8	BC-6,451	
VIDEO REC IN	9	BC-6,451	
VIDEO ERASE IN	10	BC-6,451	
REC ENABLE IN	11	BC-6,451	
	12		

CN402

GND	1	MB-49,11
GND	2	SW-7,621
	3	
REG +5V IN	4	MB-49,11
REG +5V OUT	5	SW-7,621
	6	
	7	
	8	
C SW'ING PULSE OUT(X)	9	MB-49,11
C SW'ING PULSE OUT(G)	10	MB-49,11

CN403

L:Y CH-A REC ENABLE	1	RP-15,70
L:Y CH-B REC ENABLE	2	RP-15,70
L:C CH-A REC ENABLE	3	RP-15,70
L:C CH-B REC ENABLE	4	RP-15,70
L:CH-A RE ENABLE OUT	5	RE-10,71
L:CH-B RE ENABLE OUT	6	RE-10,71
L:REC AMP ENABLE OUT	7	RP-15,70
	8	

BC-5

CN451

STB CK-1 IN	1	MB-49,11
SYS CK-1 IN	2	MB-49,11
SERIAL DATA-6 IN	3	MB-49,11
SERIAL DATA-7 IN	4	MB-49,11
SERIAL DATA-8 IN	5	MB-49,11
	6	
1/2 VD IN	7	BC-5,401
L:REC CONT IN	8	MB-49,11
REC ENABLE OUT	9	BC-5,401
VIDEO ERASE OUT	10	BC-5,401
VIDEO REC OUT	11	BC-5,401
	12	

CN452

L:TC REC OUT	1	MB-50,21
L:AUDIO CH-2 REC OUT	2	MB-50,21
L:CH-2 PB CONTROL OUT	3	MB-50,21
L:AUDIO CH-1 REC OUT	4	MB-50,21
L:CH-1 PB CONTROL OUT	5	MB-50,21
L:AUDIO MUTE IN	6	MB-50,21
L:VIDFO EE OUT	7	MB-50,21
L:LIMITER ON IN	8	MB-50,21
L:MIXING TO CH-2 IN	9	MB-50,21
L:MIXING TO CH-1 IN	10	MB-50,21

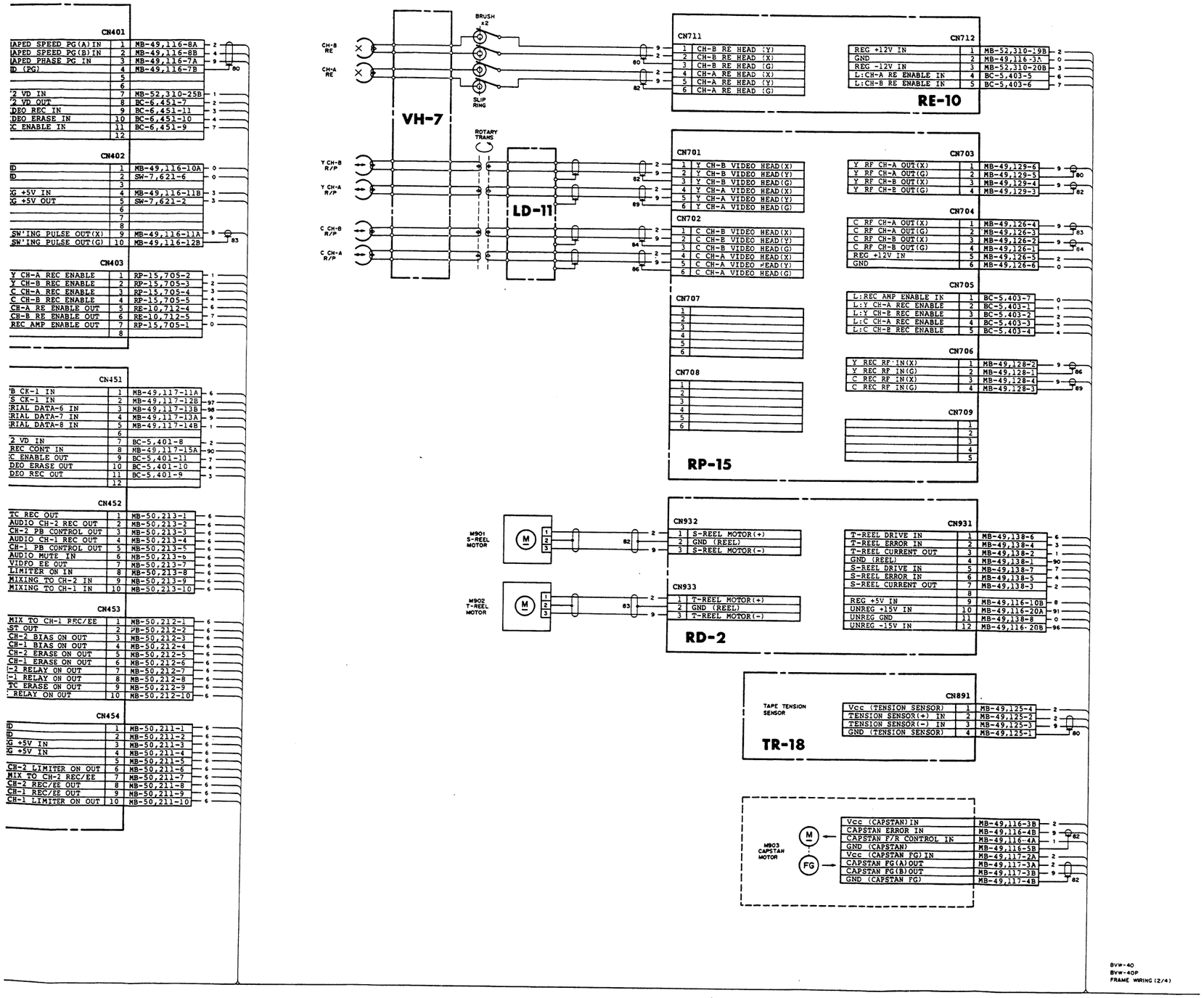
CN453

L:MIX TO CH-1 REC/EE	1	MB-50,21
FAST OUT	2	PB-50,22
L:CH-2 BIAS ON OUT	3	MB-50,21
L:CH-1 BIAS ON OUT	4	MB-50,21
L:CH-2 ERASE ON OUT	5	MB-50,21
L:CH-1 ERASE ON OUT	6	MB-50,21
CH-2 RELAY ON OUT	7	MB-50,21
CH-1 RELAY ON OUT	8	MB-50,21
L:TC ERASE ON OUT	9	MB-50,21
TC RELAY ON OUT	10	MB-50,21

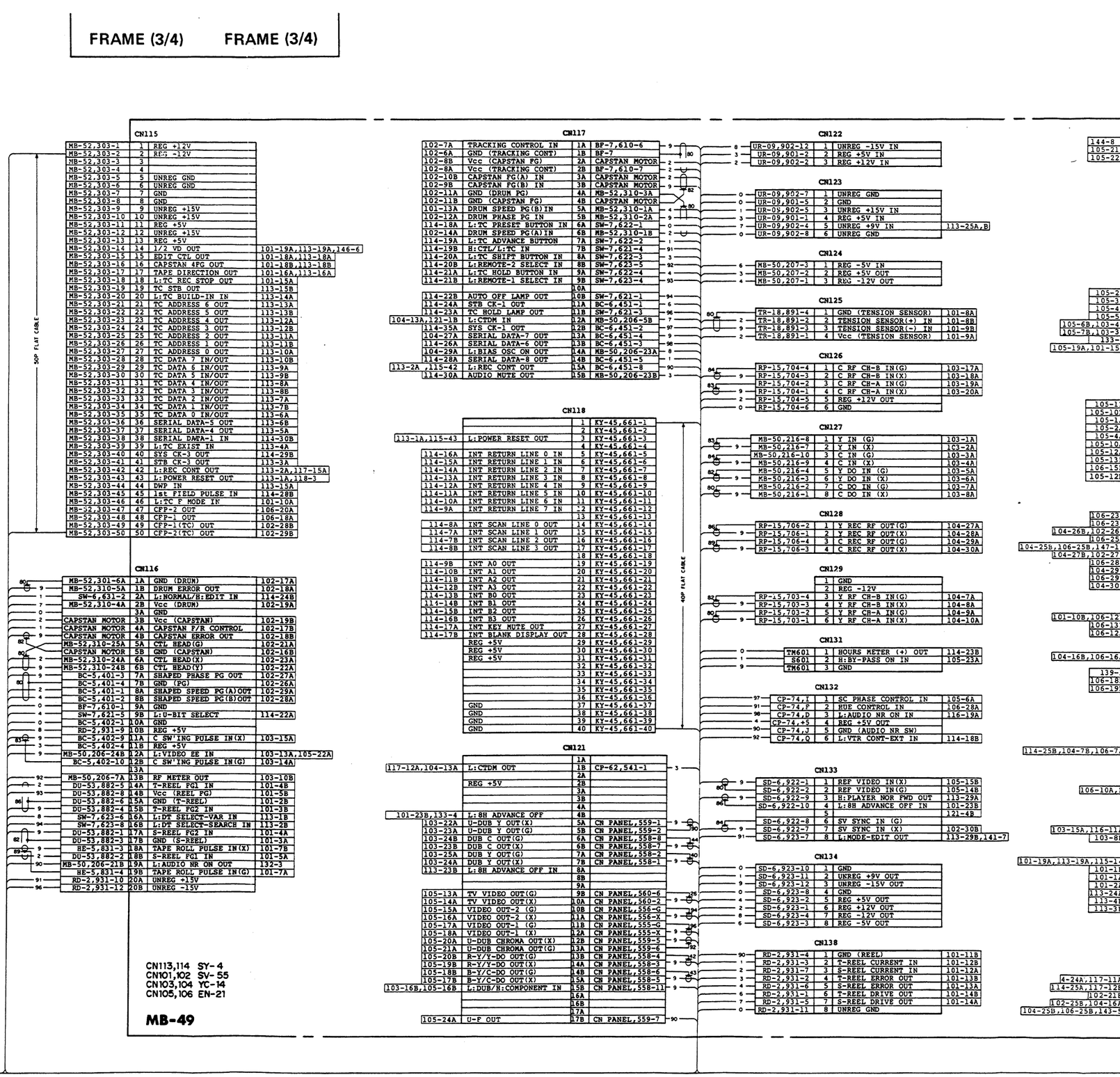
CN454

GND	1	MB-50,21
GND	2	MB-50,21
REG +5V IN	3	MB-50,21
REG +5V IN	4	MB-50,21
	5	MB-50,22
L:CH-2 LIMITER ON OUT	6	MB-50,21
L:MIX TO CH-2 REC/EE	7	MB-50,21
L:CH-2 REC/EE OUT	8	MB-50,21
L:CH-1 REC/EE OUT	9	MB-50,21
L:CH-1 LIMITER ON OUT	10	MB-50,21

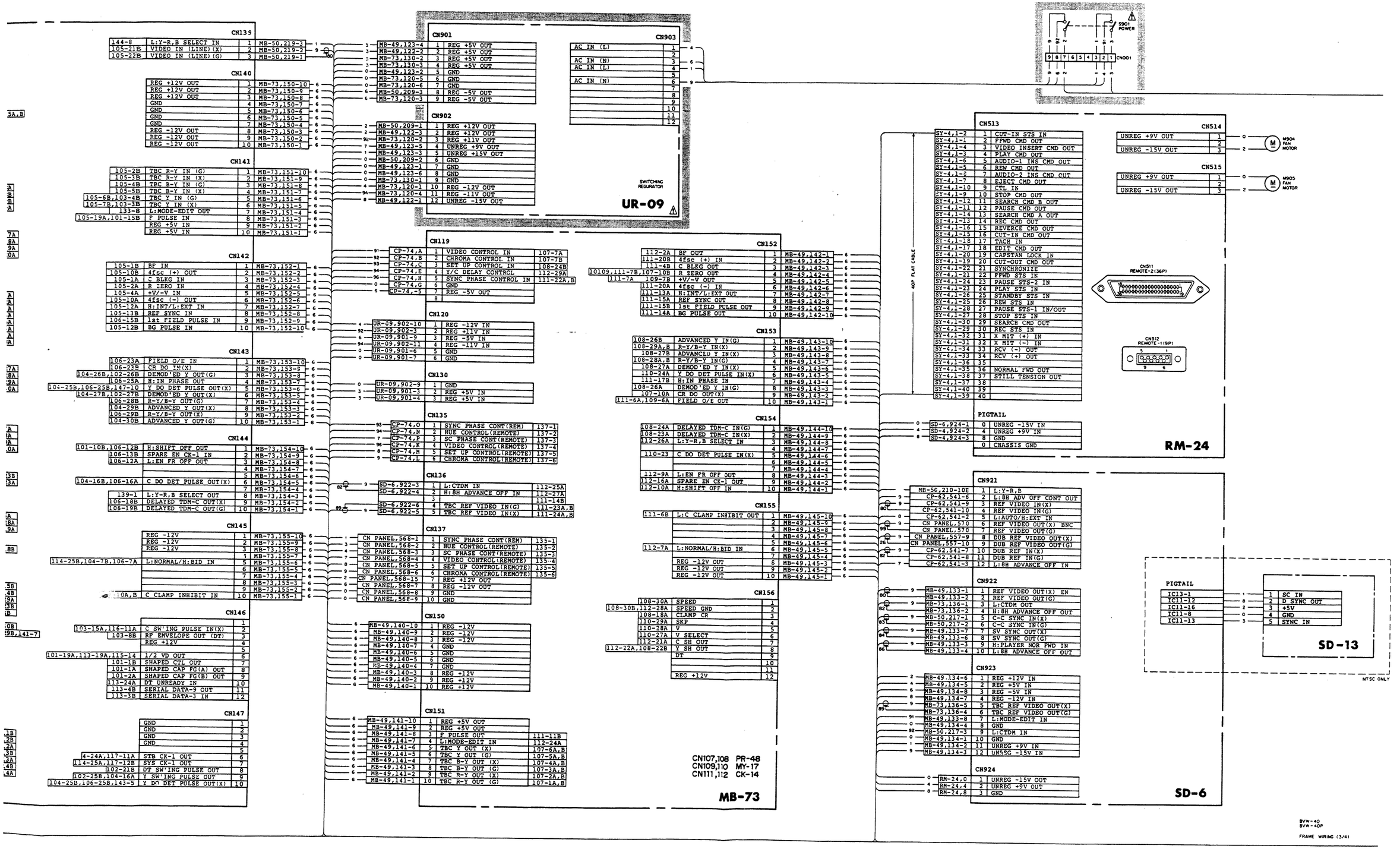
BC-6


CN401
APED SPEED PG(A) IN | 1 | MB-49,116-8A
APED SPEED PG(B) IN | 2 | MB-49,116-8B
APED PHASE PG IN | 3 | MB-49,116-7A
D (PG) | 4 | MB-49,116-7B
2 VD IN | 7 | MB-52,310-25B
2 VD OUT | 8 | BC-6,451-7
DEO REC IN | 9 | BC-6,451-11
DEO ERASE IN | 10 | BC-6,451-10
C ENABLE IN | 11 | BC-6,451-9
CN402
D | 1 | MB-49,116-10A
D | 2 | SW-7,621-6
G +5V IN | 4 | MB-49,116-11B
G +5V OUT | 5 | SW-7,621-2
SW'ING PULSE OUT(X) | 9 | MB-49,116-11A
SW'ING PULSE OUT(G) | 10 | MB-49,116-12B
CN403
Y CH-A REC ENABLE | 1 | RP-15,705-2
Y CH-B REC ENABLE | 2 | RP-15,705-3
C CH-A REC ENABLE | 3 | RP-15,705-4
C CH-B REC ENABLE | 4 | RP-15,705-5
CH-A RE ENABLE OUT | 5 | RE-10,712-4
CH-B RE ENABLE OUT | 6 | RE-10,712-5
REC AMP ENABLE OUT | 7 | RP-15,705-1
CN451
B CK-1 IN | 1 | MB-49,117-11A
S CK-1 IN | 2 | MB-49,117-12B
RIAL DATA-6 IN | 3 | MB-49,117-13B
RIAL DATA-7 IN | 4 | MB-49,117-13A
RIAL DATA-8 IN | 5 | MB-49,117-14B
2 VD IN | 7 | BC-5,401-8
REC CONT IN | 8 | MB-49,117-15A
C ENABLE OUT | 9 | BC-5,401-11
DEO ERASE OUT | 10 | BC-5,401-10
DEO REC OUT | 11 | BC-5,401-9
CN452
TC REC OUT | 1 | MB-50,213-1
AUDIO CH-2 REC OUT | 2 | MB-50,213-2
CH-2 PB CONTROL OUT | 3 | MB-50,213-3
AUDIO CH-1 REC OUT | 4 | MB-50,213-4
CH-1 PB CONTROL OUT | 5 | MB-50,213-5
AUDIO MUTE IN | 6 | MB-50,213-6
VIDPO EE OUT | 7 | MB-50,213-7
LIMITER ON IN | 8 | MB-50,213-8
MIXING TO CH-2 IN | 9 | MB-50,213-9
MIXING TO CH-1 IN | 10 | MB-50,213-10
CN453
MIX TO CH-1 REC/EE | 1 | MB-50,212-1
ST OUT | 2 | PB-50,212-2
CH-2 BIAS ON OUT | 3 | MB-50,212-3
CH-1 BIAS ON OUT | 4 | MB-50,212-4
CH-2 ERASE ON OUT | 5 | MB-50,212-5
CH-1 ERASE ON OUT | 6 | MB-50,212-6
-2 RELAY ON OUT | 7 | MB-50,212-7
-1 RELAY ON OUT | 8 | MB-50,212-8
TC ERASE ON OUT | 9 | MB-50,212-9
RELAY ON OUT | 10 | MB-50,212-10
CN454
D | 1 | MB-50,211-1
D | 2 | MB-50,211-2
G +5V IN | 3 | MB-50,211-3
G +5V IN | 4 | MB-50,211-4
CH-2 LIMITER ON OUT | 6 | MB-50,211-6
MIX TO CH-2 REC/EE | 7 | MB-50,211-7
CH-2 REC/EE OUT | 8 | MB-50,211-8
CH-1 REC/EE OUT | 9 | MB-50,211-9
CH-1 LIMITER ON OUT | 10 | MB-50,211-10
CH-B RE
CH-A RE
BRUSH ×2
SLIP RING
VH-7
ROTARY TRANS
LD-11
Y CH-B R/P
Y CH-A R/P
C CH-B R/P
C CH-A R/P
CN711
1 | CH-B RE HEAD (Y)
2 | CH-B RE HEAD (X)
3 | CH-B RE HEAD (G)
4 | CH-A RE HEAD (X)
5 | CH-A RE HEAD (Y)
6 | CH-A RE HEAD (G)
CN712
REG +12V IN | 1 | MB-52,310-19B
GND | 2 | MB-49,116-3A
REG -12V IN | 3 | MB-52,310-20B
L:CH-A RE ENABLE IN | 4 | BC-5,403-5
L:CH-B RE ENABLE IN | 5 | BC-5,403-6
RE-10
CN701
1 | Y CH-B VIDEO HEAD(X)
2 | Y CH-B VIDEO HEAD(Y)
3 | Y CH-B VIDEO HEAD(G)
4 | Y CH-A VIDEO HEAD(X)
5 | Y CH-A VIDEO HEAD(Y)
6 | Y CH-A VIDEO HEAD(G)
CN702
1 | C CH-B VIDEO HEAD(X)
2 | C CH-B VIDEO HEAD(Y)
3 | C CH-B VIDEO HEAD(G)
4 | C CH-A VIDEO HEAD(X)
5 | C CH-A VIDEO HEAD(Y)
6 | C CH-A VIDEO HEAD(G)
CN703
Y RF CH-A OUT(X) | 1 | MB-49,129-6
Y RF CH-A OUT(G) | 2 | MB-49,129-5
Y RF CH-B OUT(X) | 3 | MB-49,129-4
Y RF CH-B OUT(G) | 4 | MB-49,129-3
CN704
C RF CH-A OUT(X) | 1 | MB-49,126-4
C RF CH-A OUT(G) | 2 | MB-49,126-3
C RF CH-B OUT(X) | 3 | MB-49,126-2
C RF CH-B OUT(G) | 4 | MB-49,126-1
REG +12V IN | 5 | MB-49,126-5
GND | 6 | MB-49,126-6
CN705
L:REC AMP ENABLE IN | 1 | BC-5,403-7
L:Y CH-A REC ENABLE | 2 | BC-5,403-1
L:Y CH-B REC ENABLE | 3 | BC-5,403-2
L:C CH-A REC ENABLE | 4 | BC-5,403-3
L:C CH-B REC ENABLE | 5 | BC-5,403-4
CN706
Y REC RF IN(X) | 1 | MB-49,128-2
Y REC RF IN(G) | 2 | MB-49,128-1
C REC RF IN(X) | 3 | MB-49,128-4
C REC RF IN(G) | 4 | MB-49,128-3
CN707
CN708
CN709
RP-15
M901 S-REEL MOTOR
M902 T-REEL MOTOR
CN932
1 | S-REEL MOTOR(+)
2 | GND (REEL)
3 | S-REEL MOTOR(-)
CN933
1 | T-REEL MOTOR(+)
2 | GND (REEL)
3 | T-REEL MOTOR(-)
CN931
T-REEL DRIVE IN | 1 | MB-49,138-6
T-REEL ERROR IN | 2 | MB-49,138-4
T-REEL CURRENT OUT | 3 | MB-49,138-2
GND (REEL) | 4 | MB-49,138-1
S-REEL DRIVE IN | 5 | MB-49,138-7
S-REEL ERROR IN | 6 | MB-49,138-5
S-REEL CURRENT OUT | 7 | MB-49,138-3
| 8 |
REG +5V IN | 9 | MB-49,116-10B
UNREG +15V IN | 10 | MB-49,116-20A
UNREG GND | 11 | MB-49,138-8
UNREG -15V IN | 12 | MB-49,116-20B
RD-2
TAPE TENSION SENSOR
CN891
Vcc (TENSION SENSOR) | 1 | MB-49,125-4
TENSION SENSOR(+) IN | 2 | MB-49,125-2
TENSION SENSOR(-) IN | 3 | MB-49,125-3
GND (TENSION SENSOR) | 4 | MB-49,125-1
TR-18
M903 CAPSTAN MOTOR
Vcc (CAPSTAN) IN | MB-49,116-3B
CAPSTAN ERROR IN | MB-49,116-4B
CAPSTAN F/R CONTROL IN | MB-49,116-4A
GND (CAPSTAN) | MB-49,116-5B
Vcc (CAPSTAN FG) IN | MB-49,117-2A
CAPSTAN FG(A) OUT | MB-49,117-3A
CAPSTAN FG(B) OUT | MB-49,117-3B
GND (CAPSTAN FG) | MB-49,117-4B
BVW-40
BVW-40P
FRAME WIRING (2/4)

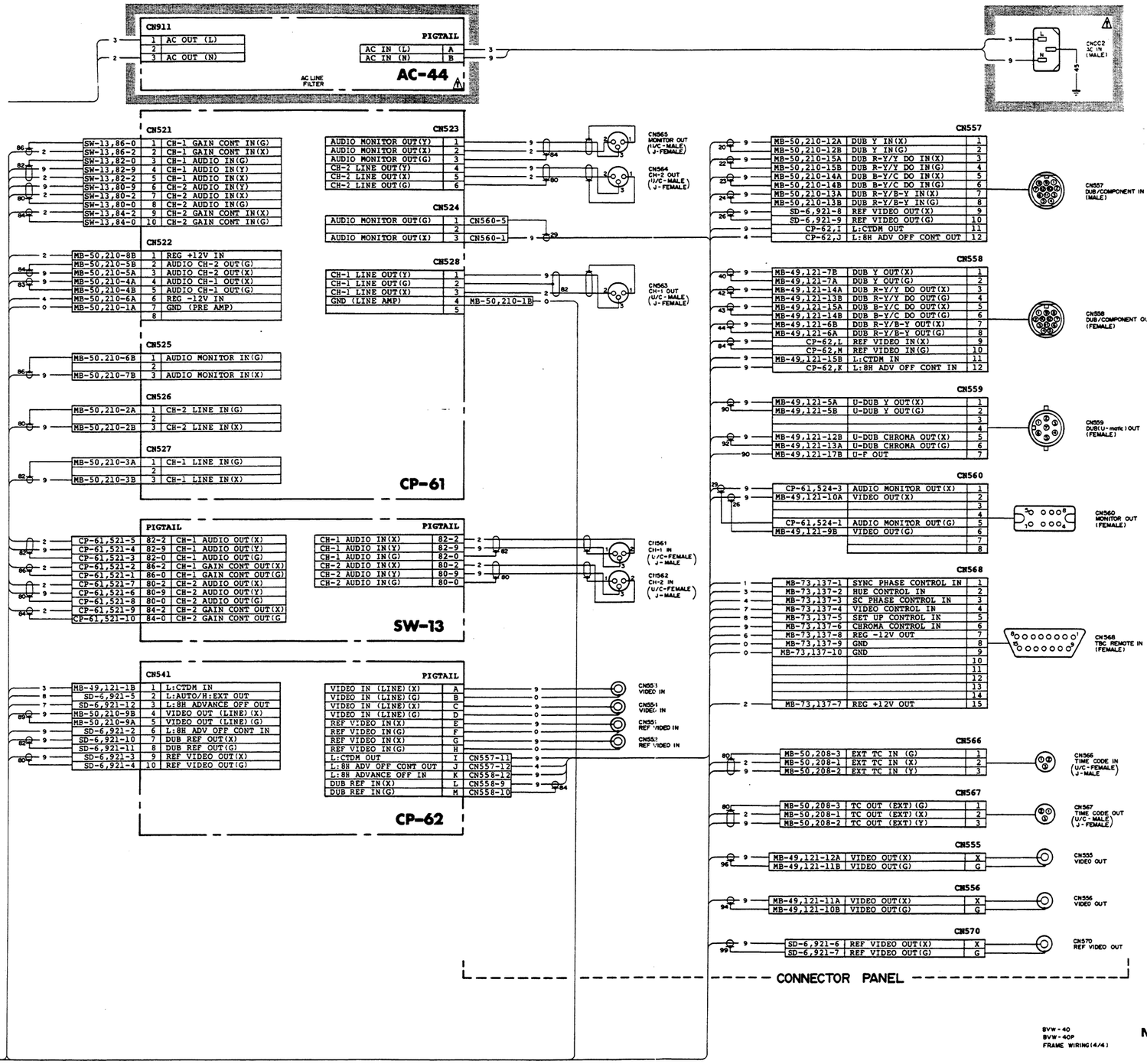
FRAME WIRING (3/4)



NOTE: The shaded and ⚠ -marked components are critical to safety.
Replace only with same components as specified.


CN139
144-8 L:Y-R,B SELECT IN 1 MB-50,219-3
105-21B VIDEO IN (LINE)(X) 2 MB-50,219-2
105-22B VIDEO IN (LINE)(G) 3 MB-50,219-1
CN140
REG +12V OUT 1 MB-73,150-10
REG +12V OUT 2 MB-73,150-9
REG +12V OUT 3 MB-73,150-8
GND 4 MB-73,150-7
GND 5 MB-73,150-6
GND 6 MB-73,150-5
GND 7 MB-73,150-4
REG -12V OUT 8 MB-73,150-3
REG -12V OUT 9 MB-73,150-2
REG -12V OUT 10 MB-73,150-1
CN141
105-2B TBC R-Y IN (G) 1 MB-73,151-10
105-3B TBC R-Y IN (X) 2 MB-73,151-9
105-4B TBC B-Y IN (G) 3 MB-73,151-8
105-5B TBC B-Y IN (X) 4 MB-73,151-7
105-6B,103-4B TBC Y IN (G) 5 MB-73,151-6
105-7B,103-3B TBC Y IN (X) 6 MB-73,151-5
133-8 L:MODE-EDIT OUT 7 MB-73,151-4
105-19A,101-15B P PULSE IN 8 MB-73,151-3
REG +5V IN 9 MB-73,151-2
REG +5V IN 10 MB-73,151-1
CN142
105-1B BF IN 1 MB-73,152-1
105-10B 4fsc (+) OUT 2 MB-73,152-2
105-1A C BLKG IN 3 MB-73,152-3
105-2A R ZERO IN 4 MB-73,152-4
105-4A +V/-V IN 5 MB-73,152-5
105-10A 4fsc (-) OUT 6 MB-73,152-6
105-12A H:INT/L:EXT IN 7 MB-73,152-7
105-13B REF SYNC IN 8 MB-73,152-8
106-15B 1st FIELD PULSE IN 9 MB-73,152-9
105-12B BG PULSE IN 10 MB-73,152-10
CN143
106-23A FIELD O/E IN 1 MB-73,153-10
106-23B CR DO IN(X) 2 MB-73,153-9
104-26B,102-26B DEMOD'ED Y OUT(G) 3 MB-73,153-8
106-25A H:IN PHASE OUT 4 MB-73,153-7
104-25B,106-25B,147-10 Y DO DET PULSE OUT(X) 5 MB-73,153-6
104-27B,102-27B DEMOD'ED Y OUT(X) 6 MB-73,153-5
106-28B R-Y/B-Y OUT(G) 7 MB-73,153-4
104-29B ADVANCED Y OUT(X) 8 MB-73,153-3
106-29B R-Y/B-Y OUT(X) 9 MB-73,153-2
104-30B ADVANCED Y OUT(G) 10 MB-73,153-1
CN144
101-10B,106-12B H:SHIFT OFF OUT 1 MB-73,154-10
106-13B SPARE EN CK-1 IN 2 MB-73,154-9
106-12A L:EN FR OFF OUT 3 MB-73,154-8
4 MB-73,154-7
5 MB-73,154-6
104-16B,106-16A C DO DET PULSE OUT(X) 6 MB-73,154-5
7 MB-73,154-4
139-1 L:Y-R,B SELECT OUT 8 MB-73,154-3
106-18B DELAYED TDM-C OUT(X) 9 MB-73,154-2
106-19B DELAYED TDM-C OUT(G) 10 MB-73,154-1
CN145
REG -12V 1 MB-73,155-10
REG -12V 2 MB-73,155-9
REG -12V 3 MB-73,155-8
1 MB-73,155-7
114-25B,104-7B,106-7A L:NORMAL/H:BID IN 5 MB-73,155-6
6 MB-73,155-5
7 MB-73,155-4
8 MB-73,155-3
10A,B C CLAMP INHIBIT IN 10 MB-73,155-2
9 MB-73,155-1
CN146
1
103-15A,116-11A C SW'ING PULSE IN(X) 2
103-8B RF ENVELOPE OUT (DT) 3
REG +12V 4
5
101-19A,113-19A,115-14 1/2 VD OUT 6
101-1B SHAPED CTL OUT 7
101-1A SHAPED CAP FG(A) OUT 8
101-2A SHAPED CAP FG(B) OUT 9
113-24A DT UNREADY IN 10
113-4B SERIAL DATA-9 OUT 11
113-3B SERIAL DATA-3 IN 12
CN147
GND 1
GND 2
GND 3
GND 4
5
4-24A,117-11A STB CK-1 OUT 6
114-25A,117-12B SYS CK-1 OUT 7
102-21B DT SW'ING PULSE OUT 8
102-25B,104-16A Y SW'ING PULSE OUT 9
104-25B,106-25B,143-5 Y DO DET PULSE OUT(X) 10
CN901
MB-49,123-4 1 REG +5V OUT
MB-49,122-2 2 REG +5V OUT
MB-73,130-2 3 REG +5V OUT
MB-73,130-3 4 REG +5V OUT
MB-49,123-2 5 GND
MB-73,120-5 6 GND
MB-73,120-6 7 GND
MB-50,209-3 8 REG -5V OUT
MB-73,120-3 9 REG -5V OUT
CN902
MB-50,209-1 1 REG +12V OUT
MB-49,122-3 2 REG +12V OUT
MB-73,120-2 3 REG +11V OUT
MB-49,123-5 4 UNREG +9V OUT
MB-49,123-3 5 UNREG +15V OUT
MB-50,209-2 6 GND
MB-49,123-1 7 GND
MB-49,123-6 8 GND
MB-73,130-1 9 GND
MB-73,120-1 10 REG -12V OUT
MB-73,120-4 11 REG -11V OUT
MB-49,122-1 12 UNREG -15V OUT
SWITCHING REGURATOR
UR-09
CN903
AC IN (L) 1
2
AC IN (N) 3
AC IN (L) 4
5
AC IN (N) 6
7
8
9
10
11
12
CN119
CP-74,A 1 VIDEO CONTROL IN 107-7A
CP-74,B 2 CHROMA CONTROL IN 107-7B
CP-74,C 3 SET UP CONTROL IN 108-24B
CP-74,E 4 Y/C DELAY CONTROL 112-29A
CP-74,H 5 SYNC PHASE CONTROL IN 111-22A,B
CP-74,G 6 GND
CP-74,5 7 REG -5V OUT
8
CN120
UR-09,902-10 1 REG -12V IN
UR-09,902-3 2 REG +11V IN
UR-09,901-9 3 REG -5V IN
UR-09,902-11 4 REG -11V IN
UR-09,901-6 5 GND
UR-09,901-7 6 GND
CN130
UR-09,902-9 1 GND
UR-09,901-5 2 REG +5V IN
UR-09,901-4 3 REG +5V IN
CN135
CP-74,O 1 SYNC PHASE CONT(REM) 137-1
CP-74,N 2 HUE CONTROL(REMOTE) 137-2
CP-74,P 3 SC PHASE CONT(REMOTE) 137-3
CP-74,K 4 VIDEO CONTROL(REMOTE) 137-4
CP-74,M 5 SET UP CONTROL(REMOTE) 137-5
CP-74,L 6 CHROMA CONTROL(REMOTE) 137-6
CN136
SD-6,922-3 1 L:CTDM IN 112-25A
SD-6,922-4 2 H:8H ADVANCE OFF IN 112-27A
3 111-14B
SD-6,922-6 4 TBC REF VIDEO IN(G) 111-23A,B
SD-6,922-5 5 TBC REF VIDEO IN(X) 111-24A,B
CN137
CN PANEL,568-1 1 SYNC PHASE CONT(REM) 135-1
CN PANEL,568-2 2 HUE CONTROL(REMOTE) 135-2
CN PANEL,568-3 3 SC PHASE CONT(REMOTE) 135-3
CN PANEL,568-4 4 VIDEO CONTROL(REMOTE) 135-4
CN PANEL,568-5 5 SET UP CONTROL(REMOTE) 135-5
CN PANEL,568-6 6 CHROMA CONTROL(REMOTE) 135-6
CN PANEL,568-15 7 REG +12V OUT
CN PANEL,568-7 8 REG -12V OUT
CN PANEL,568-8 9 GND
CN PANEL,568-9 10 GND
CN150
MB-49,140-10 1 REG -12V
MB-49,140-9 2 REG -12V
MB-49,140-8 3 REG -12V
MB-49,140-7 4 GND
MB-49,140-6 5 GND
MB-49,140-5 6 GND
MB-49,140-4 7 GND
MB-49,140-3 8 REG +12V
MB-49,140-2 9 REG +12V
MB-49,140-1 10 REG +12V
CN151
MB-49,141-10 1 REG +5V OUT
MB-49,141-9 2 REG +5V OUT
MB-49,141-8 3 F PULSE OUT 111-11B
MB-49,141-7 4 L:MODE-EDIT IN 112-24A
MB-49,141-6 5 TBC Y OUT (X) 107-6A,B
MB-49,141-5 6 TBC Y OUT (G) 107-5A,B
MB-49,141-4 7 TBC B-Y OUT (X) 107-4A,B
MB-49,141-3 8 TBC B-Y OUT (G) 107-3A,B
MB-49,141-2 9 TBC R-Y OUT (X) 107-2A,B
MB-49,141-1 10 TBC R-Y OUT (G) 107-1A,B
CN152
112-2A BF OUT 1 MB-49,142-1
111-20B 4fsc (+) IN 2 MB-49,142-2
111-4B C BLKG OUT 3 MB-49,142-3
10109,111-7B,107-10B R ZERO OUT 4 MB-49,142-4
111-7A 109-7B +V/-V OUT 5 MB-49,142-5
111-20A 4fsc (-) IN 6 MB-49,142-6
111-13A H:INT/L:EXT OUT 7 MB-49,142-7
111-15A REF SYNC OUT 8 MB-49,142-8
111-15B 1st FIELD PULSE OUT 9 MB-49,142-9
111-14A BG PULSE OUT 10 MB-49,142-10
CN153
108-26B ADVANCED Y IN(G) 1 MB-49,143-10
108-29A,B R-Y/B-Y IN(X) 2 MB-49,143-9
108-27B ADVANCED Y IN(X) 3 MB-49,143-8
108-28A,B R-Y/B-Y IN(G) 4 MB-49,143-7
108-27A DEMOD'ED Y IN(X) 5 MB-49,143-6
110-24A Y DO DET PULSE IN(X) 6 MB-49,143-5
111-17B H:IN PHASE IN 7 MB-49,143-4
108-26A DEMOD'ED Y IN(G) 8 MB-49,143-3
107-10A CR DO OUT(X) 9 MB-49,143-2
111-6A,109-6A FIELD O/E OUT 10 MB-49,143-1
CN154
108-24A DELAYED TDM-C IN(G) 1 MB-49,144-10
108-23A DELAYED TDM-C IN(X) 2 MB-49,144-9
112-26A L:Y-R,B SELECT IN 3 MB-49,144-8
4 MB-49,144-7
110-23 C DO DET PULSE IN(X) 5 MB-49,144-6
6 MB-49,144-5
7 MB-49,144-4
112-9A L:EN FR OFF OUT 8 MB-49,144-3
112-16A SPARE EN CK-1 OUT 9 MB-49,144-2
112-10A H:SHIFT OFF IN 10 MB-49,144-1
CN155
111-6B L:C CLAMP INHIBIT OUT 1 MB-49,145-10
2 MB-49,145-9
3 MB-49,145-8
4 MB-49,145-7
5 MB-49,145-6
112-7A L:NORMAL/H:BID IN 6 MB-49,145-5
7 MB-49,145-4
REG -12V OUT 8 MB-49,145-3
REG -12V OUT 9 MB-49,145-2
REG -12V OUT 10 MB-49,145-1
CN156
108-30A SPEED 1
108-30B,112-28A SPEED GND 2
108-18A CLAMP CR 3
110-29A SKP 4
110-28A V 5
110-27A V SELECT 6
112-21A C SH OUT 7
112-22A,108-22B Y SH OUT 8
DT 9
10
11
REG +12V 12
CN107,108 PR-48
CN109,110 MY-17
CN111,112 CK-14
MB-73
S901 POWER
CN001
9 8 7 6 5 4 3 2 1
40P FLAT CABLE
CN513
SY-4,1-2 1 CUT-IN STS IN
SY-4,1-1 2 FFWD CMD OUT
SY-4,1-4 3 VIDEO INSERT CMD OUT
SY-4,1-3 4 PLAY CMD OUT
SY-4,1-6 5 AUDIO-1 INS CMD OUT
SY-4,1-5 6 REW CMD OUT
SY-4,1-8 7 AUDIO-2 INS CMD OUT
SY-4,1-7 8 EJECT CMD OUT
SY-4,1-10 9 CTL IN
SY-4,1-9 10 STOP CMD OUT
SY-4,1-12 11 SEARCH CMD B OUT
SY-4,1-11 12 PAUSE CMD OUT
SY-4,1-14 13 SEARCH CMD A OUT
SY-4,1-13 14 REC CMD OUT
SY-4,1-16 15 REVERCE CMD OUT
SY-4,1-15 16 CUT-IN CMD OUT
SY-4,1-18 17 TACH IN
SY-4,1-17 18 EDIT CMD OUT
SY-4,1-20 19 CAPSTAN LOCK IN
SY-4,1-19 20 CUT-OUT CMD OUT
SY-4,1-22 21 SYNCHRONIZE
SY-4,1-21 22 FFWD STS IN
SY-4,1-24 23 PAUSE STS-2 IN
SY-4,1-23 24 PLAY STS IN
SY-4,1-26 25 STANDBY STS IN
SY-4,1-25 26 REW STS IN
SY-4,1-28 27 PAUSE STS-1 IN/OUT
SY-4,1-27 28 STOP STS IN
SY-4,1-30 29 SEARCH CMD OUT
SY-4,1-29 30 REC STS IN
SY-4,1-32 31 X MIT (+) IN
SY-4,1-31 32 X MIT (-) IN
SY-4,1-34 33 RCV (-) OUT
SY-4,1-33 34 RCV (+) OUT
SY-4,1-36 35
SY-4,1-35 36 NORMAL FWD OUT
SY-4,1-38 37 STILL TENSION OUT
SY-4,1-37 38
SY-4,1-40 39
SY-4,1-39 40
PIGTAIL
SD-6,924-1 0 UNREG -15V IN
SD-4,924-2 4 UNREG +9V IN
SD-4,924-3 8 GND
0 CHASSIS GND
RM-24
CN514
UNREG +9V OUT 1
UNREG -15V OUT 2
3
M904 FAN MOTOR
CN515
UNREG +9V OUT 1
UNREG -15V OUT 2
3
M905 FAN MOTOR
CN511 REMOTE-2(36P)
CN512 REMOTE-1(9P)
CN921
MB-50,210-10E 1 L:Y-R,B
CP-62,541-6 2 L:8H ADV OFF CONT OUT
CP-62,541-9 3 REF VIDEO IN(X)
CP-62,541-10 4 REF VIDEO IN(G)
CP-62,541-2 5 L:AUTO/H:EXT IN
CN PANEL,570 6 REF VIDEO OUT(X) BNC
CN PANEL,570 7 REF VIDEO OUT(G)
CN PANEL,557-9 8 DUB REF VIDEO OUT(X)
CN PANEL,557-10 9 DUB REF VIDEO OUT(G)
CP-62,541-7 10 DUB REF IN(X)
CP-62,541-8 11 DUB REF IN(G)
CP-62,541-3 12 L:8H ADVANCE OFF IN
CN922
MB-49,133-1 1 REF VIDEO OUT(X) EN
MB-49,133-2 2 REF VIDEO OUT(G)
MB-73,136-1 3 L:CTDM OUT
MB-73,136-2 4 H:8H ADVANCE OFF OUT
MB-50,217-1 5 C-C SYNC IN(X)
MB-50,217-2 6 C-C SYNC IN(G)
MB-49,133-7 7 SV SYNC OUT(X)
MB-49,133-6 8 SV SYNC OUT(G)
MB-49,133-5 9 H:PLAYER NOR FWD IN
MB-49,133-4 10 L:8H ADVANCE OFF OUT
CN923
MB-49,134-6 1 REG +12V IN
MB-49,134-5 2 REG +5V IN
MB-49,134-8 3 REG -5V IN
MB-49,134-7 4 REG -12V IN
MB-73,136-5 5 TBC REF VIDEO OUT(X)
MB-73,136-4 6 TBC REF VIDEO OUT(G)
MB-49,133-8 7 L:MODE-EDIT IN
MB-49,134-4 8 GND
MB-50,217-3 9 L:CTDM IN
MB-49,134-1 10 GND
MB-49,134-2 11 UNREG +9V IN
MB-49,134-3 12 UNREG -15V IN
CN924
RM-24,0 1 UNREG -15V OUT
RM-24,4 2 UNREG +9V OUT
RM-24,8 3 GND
SD-6
PIGTAIL
IC13-1 1 SC IN
IC11-12 2 D SYNC OUT
IC11-16 3 +5V
IC11-8 4 GND
IC11-13 5 SYNC IN
SD-13
NTSC ONLY
BVW-40
BVW-40P
FRAME WIRING (3/4)

FRAME WIRING (4/4)



NOTE: **The shaded and ⚠ -marked components are critical to safety.**
Replace only with same components as specified.

SECTION 19
SPARE PARTS AND FIXTURE

19-1. PARTS INFORMATION

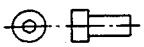
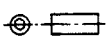
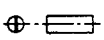
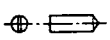
1. Safety Related Component Warning
   Components identified by shading marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony parts whose parts numbers appear as shown in this manual or in service bulletins and service manual supplements published by Sony.
2. Replacement Parts supplied from Sony Parts Center will sometimes have different shape and outside view from the parts which actually in use. This is due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts".
   . This manual's exploded views and electrical spare parts lists are indicating the parts numbers of "the standardized genuine parts at present".
   . Regarding engineering parts changes in our engineering department, refer Sony service bulletins and service manual supplements.
3. The parts as shown "S" in SP space on the exploded views and electrical spare parts list are normally stocked for replacement purposes. The parts as shown "O" in SP space are not normally required for routine service work. Orders for parts as shown "O" will be processed, but allow for additional delivery time.
4. Item with no part number and/or no description are not stocked because they are seldom required for routine service.
5. (T) after a spring description is shown on the exploded views in order to indicate the number of a spring turn required for the use.
   (Example)
   Spring, tension (24T); This spring must be cut at its 24th turn for actual use.

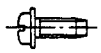
19-2. EXPLODED VIEW

. Exploded views are composed of the following blocks.

(1) Take-up Side Reel Chassis
   take-up reel table
   take-up side brake
   reel motor
   tape beginning sensor
(2) Supply Side Reel Chassis
   supply reel table
   supply side brake
   reel motor
(3) Head Drum, Stationary Heads and Tape Guides Block
   head drum assy
   CTL/full erase heads
   audio/TC heads
   tape guide
   capstan motor
(4) Threading Ring Block
   threading ring
(5) Pinch Press Mechanism Block
   pinch press mechanism
(6) Supply Tension Regulator Block
   supply tension regulator
(7) Gear Box Block
   gear box
(8) Level Control Chassis Block
   level control chassis
(9) Function Control Chassis Block
   function control chassis
   search dial
   hinge
(10) Connector Panel Block
   connector panel
   ventilation fun
(11) TBC Control Block
   TBC control block
   hours meter
(12) Chassis Block (1)
   mother board

(13) Chassis Block (2)
(14) Cassette-up Compartment Block
cassette-up compartment
(15) Ornamental Panel Block (1)
function control panel
level control panel
(16) Ornamental Panel Block (2)
side panel
top panel
(17) Printed Circuit Board Block (1)
printed circuit board
(18) Printed Circuit Board Block (2)
shield case

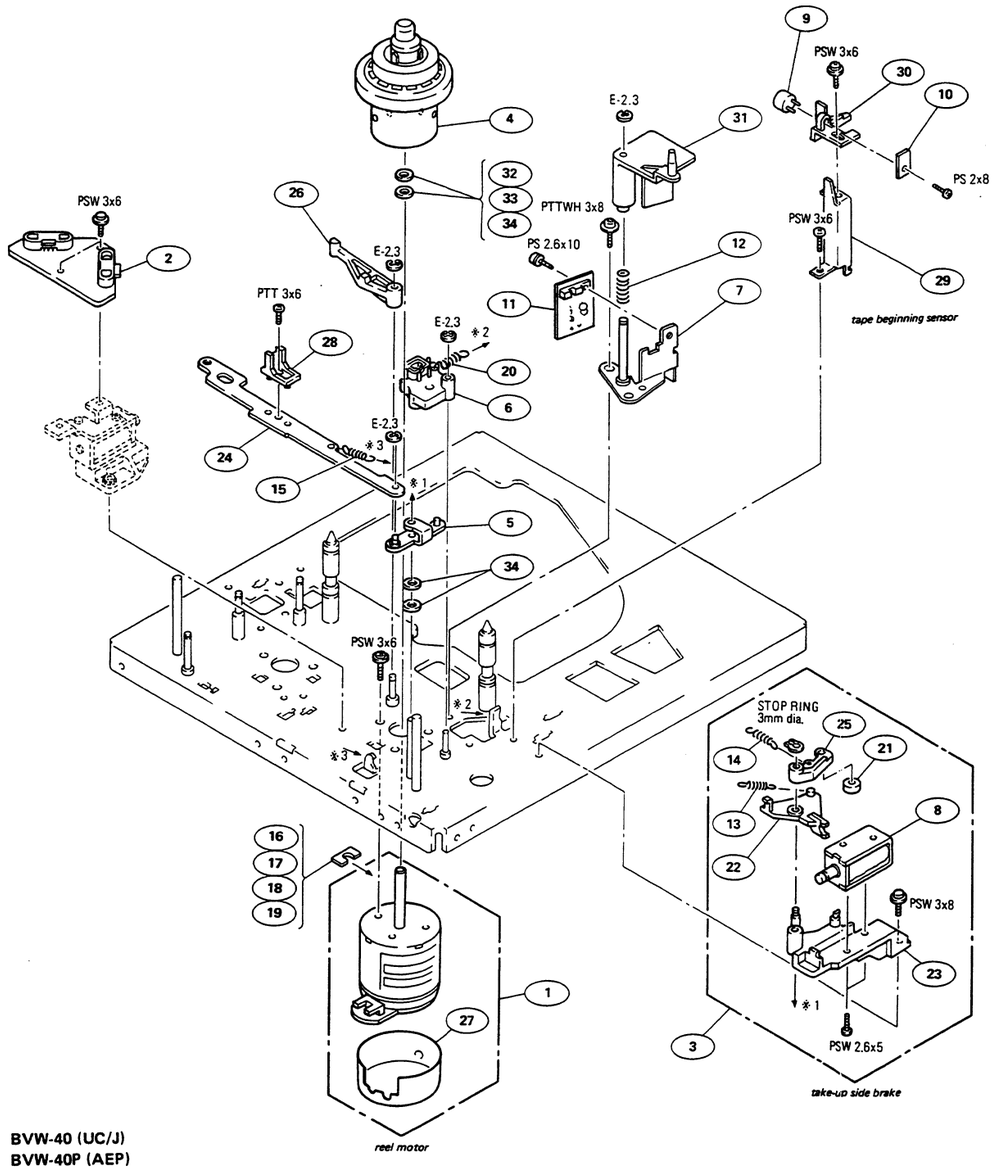
	HEXAGON SOCKET SCREW 	HEXAGON SET SCREW 	(–) SET SCREW FLAT POINT 	(–) SET SCREW CONE POINT 
2.6 x 3	———	7-621-734-09	———	———
2.6 x 4	7-621-996-24	7-621-735-09	———	———
2.6 x 5	———	7-621-736-09	———	———
2.6 x 6	7-683-412-05	———	———	7-621-712-55
2.6 x 8	7-683-413-05	———	———	7-621-712-65
2.6 x 10	———	———	———	7-621-712-75
3 x 4	———	7-683-238-01	———	———
3 x 5	———	———	7-683-175-01	———
3 x 6	7-683-403-04	———	7-683-176-01	7-683-176-21
3 x 8	7-683-404-04	———	———	7-683-177-21
3 x 10	7-683-405-04	———	———	7-683-178-21
3 x 12	———	———	———	7-683-179-21

	PS 	PSW 	B (BZn-N) 	B (Cr-N) 	PTT 	PTTWH 
2.6 x 4	7-621-972-05	———	7-621-912-10	7-621-912-18	———	7-687-508-31
2.6 x 6	7-621-972-25	7-621-981-15	7-621-912-30	7-621-912-38	———	7-687-501-31
2.6 x 8	7-621-972-35	7-621-981-25	7-621-912-40	7-621-912-48	———	7-687-502-31
2.6 x 10	7-621-972-45	7-621-981-35	7-621-912-50	7-621-912-58	———	7-687-503-31
2.6 x 12	7-621-972-55	7-621-981-45	7-621-912-60	7-621-912-68	———	7-687-504-31
2.6 x 14	7-621-972-65	7-621-981-55	7-621-912-70	7-621-912-78	———	7-687-505-31
2.6 x 16	7-621-972-75	7-621-981-65	7-621-912-80	7-621-912-88	———	7-687-506-31
2.6 x 20	7-621-972-85	7-621-981-75	7-621-912-90	7-621-912-98	———	7-687-507-31
3 x 5	7-686-446-01	———	———	———	———	———
3 x 6	7-686-447-01	7-686-527-01	7-686-624-09	7-686-624-04	7-687-411-31	7-687-510-31
3 x 8	7-686-448-01	7-686-528-01	7-686-625-09	7-686-625-04	7-687-412-31	7-687-511-31
3 x 10	7-686-449-01	7-686-529-01	7-686-626-09	7-686-626-04	7-687-413-31	7-687-512-31
3 x 12	7-686-450-01	7-686-530-01	7-686-627-09	7-686-627-04	7-687-414-31	7-687-513-31
3 x 16	7-686-452-01	7-686-532-01	7-686-629-09	7-686-629-04	———	———
3 x 20	7-686-453-01	7-686-533-01	7-686-630-09	7-686-630-04	———	———
3 x 25	7-686-454-01	7-686-534-01	7-686-631-09	7-686-631-04		
4 x 8	7-686-468-01	7-686-548-01	7-686-635-09	7-686-635-04	———	———
4 x 12	7-686-470-01	7-686-550-01	7-686-637-09	7-686-637-04	———	———
4 x 14	7-686-471-01	———	7-686-638-09	7-686-638-04	———	———
4 x 16	7-686-472-01	———	7-686-639-09	7-686-639-04	———	———
4 x 20	7-686-473-01	———	7-686-640-09	7-686-640-04	———	———

	FLAT WASHER SMALL W.	FLAT WASHER MIDDLE W.	SPRING WASHER SW.	TOOTHED WASHER TYPE B LW.	HEXAGON NUT N.
2.6 mm	7-688-002-01	7-688-002-12	7-623-207-22	7-623-421-07	7-622-207-05
3 mm	7-688-003-01	7-688-003-12	7-688-003-11	7-623-422-07	7-684-023-04
4 mm	7-688-004-01	7-688-004-12	7-623-210-22	7-623-423-07	7-684-024-04
5 mm	7-688-005-01	7-688-005-01	7-623-212-22	———	7-684-025-04

	STOP RING E TYPE E.
2	7-624-104-04
2.3	7-624-105-04
3	7-624-106-04
4	7-624-108-04
5	7-624-109-04
6	7-624-110-04

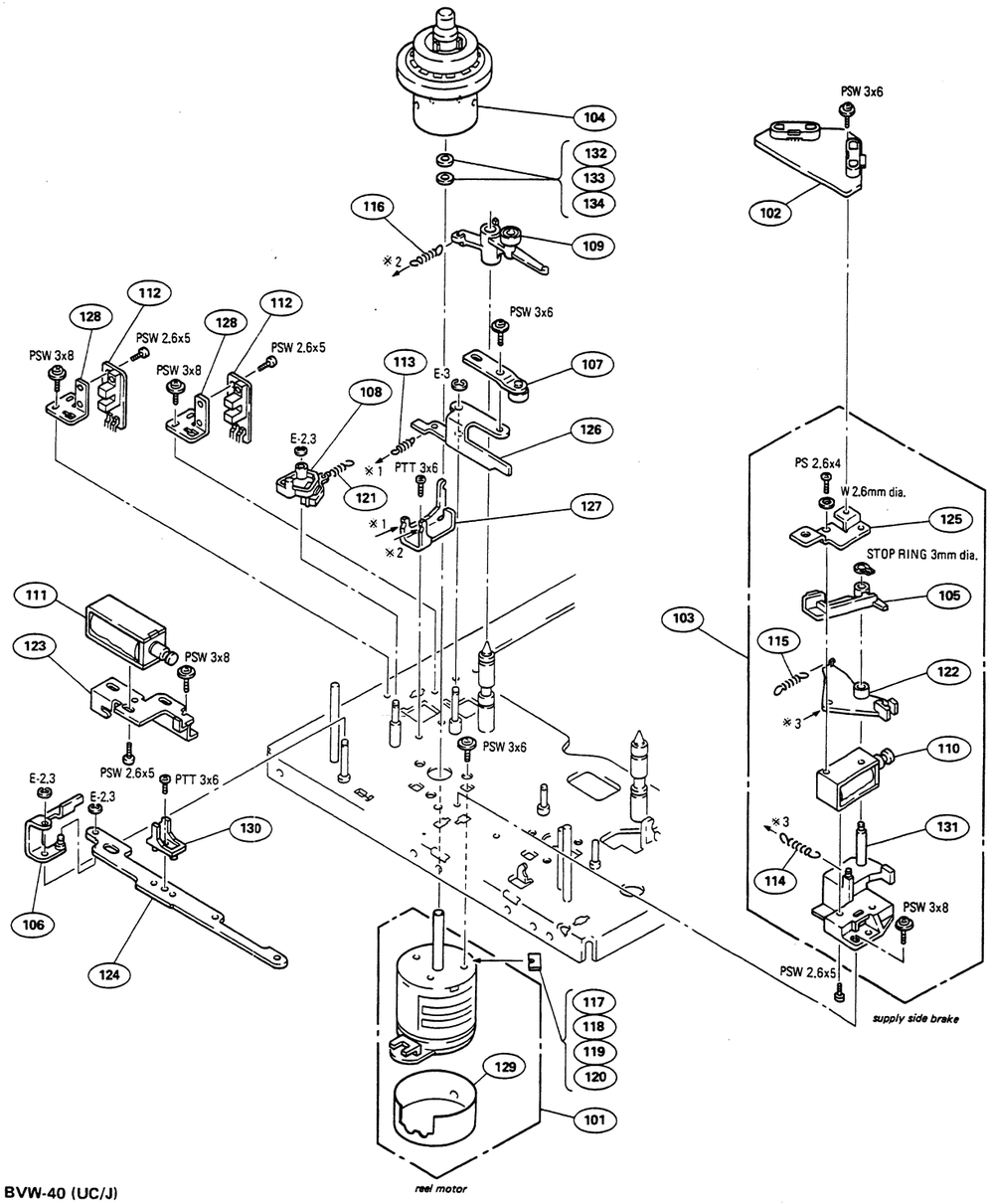
Take-up Side Reel Chassis



BVW-40 (UC/J)
BVW-40P (AEP)

No.	Parts No.	SP	Description
1	A-6737-113-B	s	MOTOR ASSY, REEL
2	A-6739-018-A	s	PC BOARD ASSY, DM
3	A-6741-044-B	s	BRAKE ASSY, T
4	X-3675-801-3	s	TABLE ASSY, REEL
5	X-3675-804-0	o	ARM ASSY, TB
6	X-3675-818-0	s	BRAKE ASSY, M
7	X-3683-502-0	o	PLATE ASSY, MR
8	1-454-336-00	s	SOLENOID, PLUNGER "T-BRAKE"
9	1-459-051-00	s	HEAD, SENSING
10	1-586-946-00	o	PRINTED CIRCUIT BOARD, SS-8
11	1-609-094-11	s	PRINTED CIRCUIT BOARD, MS-12
12	3-434-052-00	s	SPRING, COMPRESSION
13	3-489-310-XX	s	SPRING, TENSION (18T)
14	3-508-108-XX	s	SPRING, TENSION (17T)
15	3-575-358-00	s	SPRING, TENSION
16	3-630-035-01	s	SPACER, VIDEO HEAD (0.01T)
17	3-630-035-11	s	SPACER, VIDEO HEAD (0.02T)
18	3-630-035-21	s	SPACER, VIDEO HEAD (0.03T)
19	3-630-035-31	s	SPACER, VIDEO HEAD (0.04T)
20	3-648-452-00	s	SPRING, TENSION
21	3-654-617-03	s	RUBBER, T BRAKE
22	3-654-618-00	o	LIMITER, T BRAKE
23	3-654-619-00	o	CHASSIS, T BRAKE
24	3-675-815-00	o	JOINT, MB
25	3-675-816-00	o	TABLE, BRAKE, T
26	3-675-825-00	o	ARM, RELEASE
27	3-675-826-00	o	COVER, SHIELD, RM
28	3-675-833-00	o	HOLDER, MB
29	3-677-701-00	o	BRACKET, T SENSOR
30	3-677-702-00	o	HOLDER, T SENSOR
31	3-683-557-01	o	LEVER, MR
32	3-701-441-01	s	WASHER, POLY 4MM DIA. (0.13T)
33	3-701-441-11	s	WASHER, POLY 4MM DIA. (0.25T)
34	3-701-441-21	s	WASHER, POLY 4MM DIA. (0.5T)

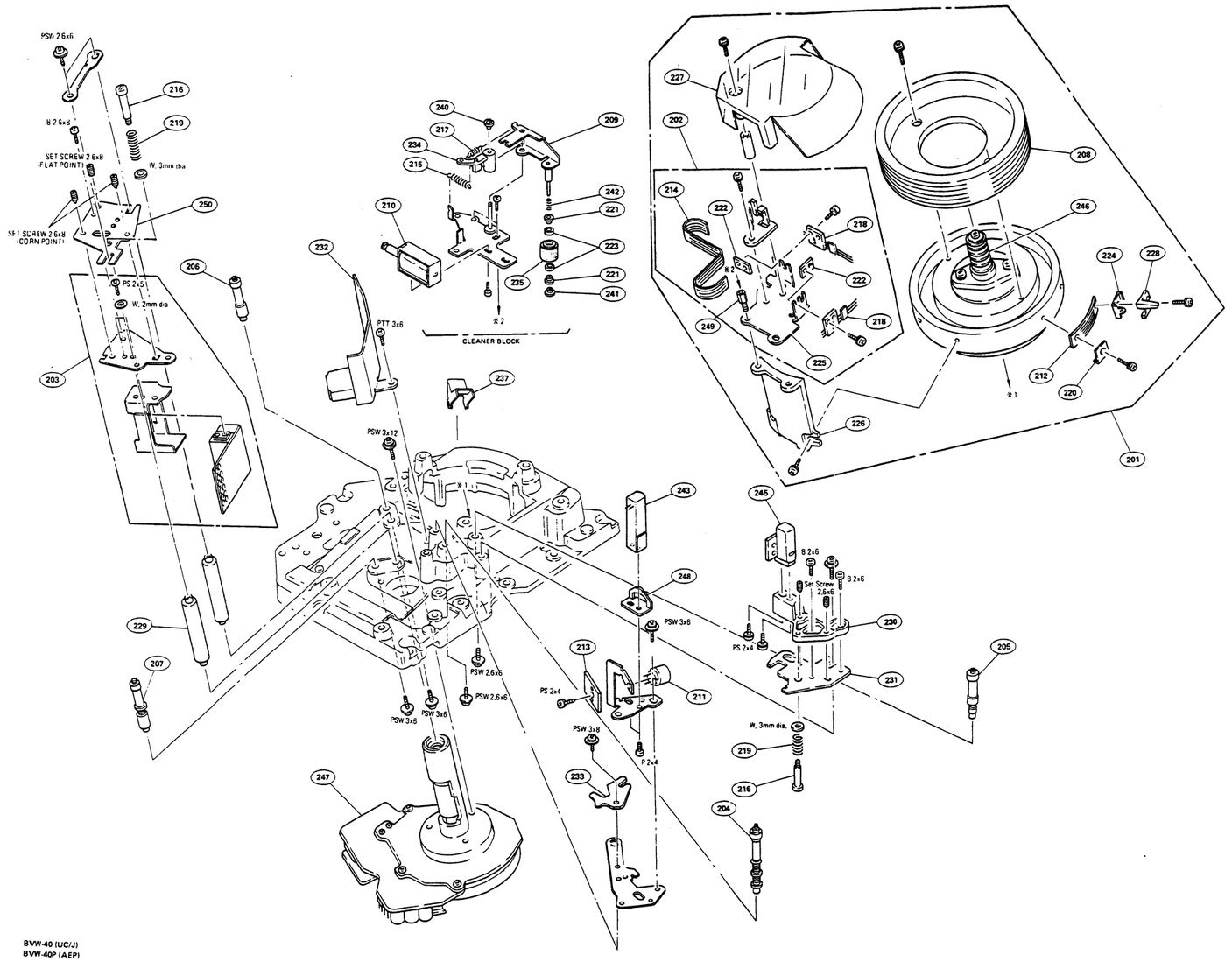
Supply Side Reel Chassis



BVW-40 (UC/J)
BVW-40P (AEP)

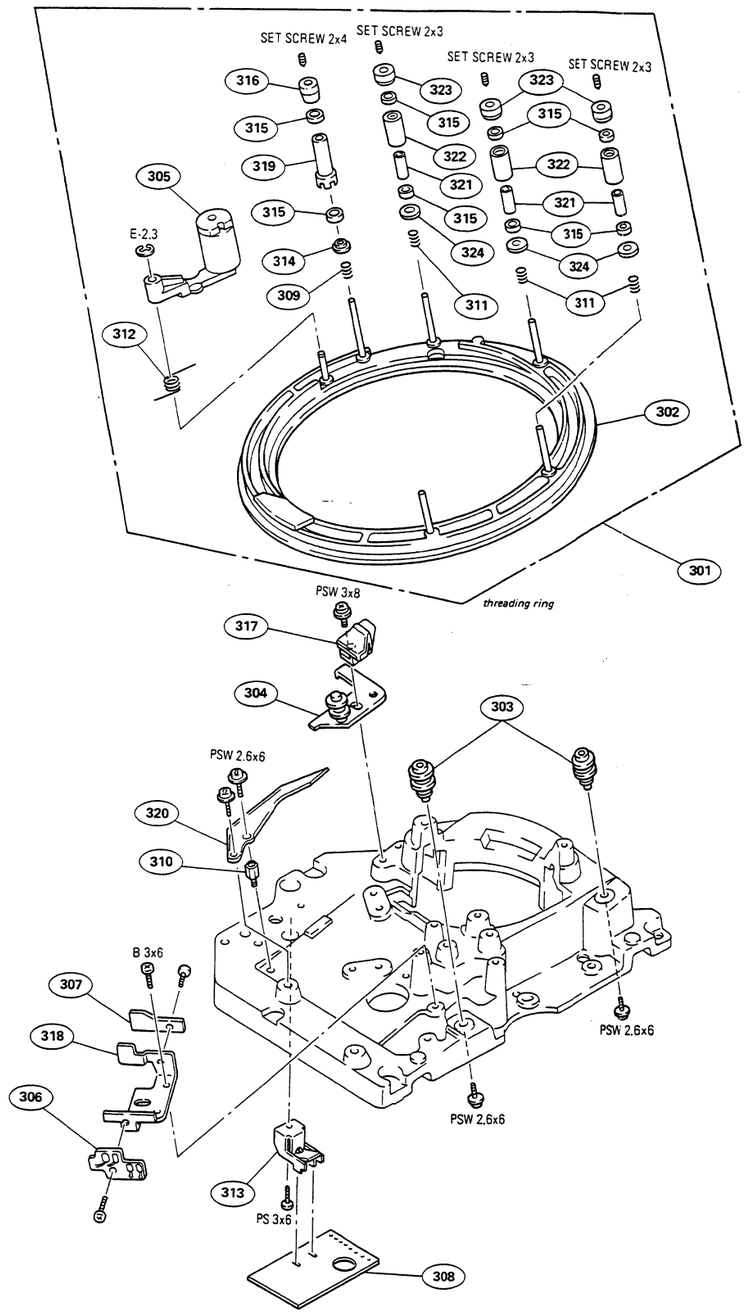
No.	Parts No.	SP	Description
101	A-6737-113-B	s	MOTOR ASSY, REEL
102	A-6739-018-A	s	PC BOARD ASSY, DM
103	A-6741-045-A	o	BRAKE ASSY, S
104	X-3675-801-3	s	TABLE ASSY, REEL
105	X-3675-803-0	s	ARM ASSY, S BRAKE
106	X-3675-805-0	o	ARM ASSY, SB
107	X-3675-806-0	o	PLATE ASSY, ADJUSTMENT, R
108	X-3675-818-0	s	BRAKE ASSY, M
109	X-3675-833-0	o	ARM ASSY, TE
110	1-454-336-00	s	SOLENOID, PLUNGER "S-BRAKE"
111	1-454-337-00	s	SOLENOID, PLUNGER "MAIN BRAKE"
112	1-608-060-00	0	PRINTED CIRCUIT BOARD, TE-2
113	2-245-253-00	s	SPRING
114	3-534-558-00	s	SPRING, TENSION
115	3-568-814-00	s	SPRING, TENSION
116	3-575-358-00	s	SPRING, TENSION
117	3-630-035-01	s	SPACER, VIDEO HEAD (0.01T)
118	3-630-035-11	s	SPACER, VIDEO HEAD (0.02T)
119	3-630-035-21	s	SPACER, VIDEO HEAD (0.03T)
120	3-630-035-31	s	SPACER, VIDEO HEAD (0.04T)
121	3-648-452-00	s	SPRING, TENSION
122	3-675-803-00	o	LIMITER, S BRAKE
123	3-675-810-00	o	BASE, MB SOLENOID
124	3-675-815-00	o	JOINT, MB
125	3-675-818-00	o	BRACKET, DM
126	3-675-819-00	o	ARM, RING
127	3-675-820-00	o	HOOK, SPRING
128	3-675-821-00	o	BRACKET, TE
129	3-675-826-00	o	COVER, SHIELD, RM
130	3-675-833-00	o	HOLDER, MB
131	3-675-838-00	o	BASE, S BRAKE
132	3-701-441-01	s	WASHER, POLY 4MM DIA. (0.13T)
133	3-701-441-11	s	WASHER, POLY 4MM DIA. (0.25T)
134	3-701-441-21	s	WASHER, POLY 4MM DIA. (0.5T)

Head Drum, Stationary Heads and Tape Guides Block



No.	Parts No.	SP	Description
201	A-6050-264-A	s	HEAD DRUM ASSY, DSH-45A-R
202	A-6709-452-A	o	BRUSH ASSY
203	A-6736-041-A	s	HEAD ASSY, AT
204	A-6746-027-A	s	ROLLER (TG1N) ASSY, TAPE
205	A-6746-028-A	s	ROLLER (TG2) ASSY, TAPE
206	A-6746-029-C	s	ROLLER (TG3) ASSY, TAPE
207	A-6746-030-C	s	ROLLER (TG4) ASSY, TAPE
208	A-6762-183-A	s	DRUM ASSY, UPPER DSR-45-R
209	X-3675-854-1	o	LEVER ASSY, C
210	1-454-372-11	s	SOLENOID, PLUNGER "CLEANER"
211	1-459-051-00	s	HEAD, SENSING
212	1-586-633-00	s	CONDENSATION SENSOR
213	1-586-946-00	o	PRINTED CIRCUIT BOARD, SS-8
214	1-611-563-00	o	PRINTED CIRCUIT BOARD, SR-21
215	3-140-263-XX	s	SPRING, TENSION (23T)
216	3-437-173-02	o	SCREW, HEAD ADJUSTING
217	3-542-475-00	s	SPRING, TENSION
218	3-607-104-00	o	BRUSH
219	3-653-350-00	s	SPRING, COMPRESSION
220	3-655-631-00	o	TERMINAL, GROUND
221	3-655-966-00	s	SPACER, STEP
222	3-665-001-00	o	NUT, PLATE
223	3-669-443-00	s	BEARING, BALL
224	3-675-701-00	o	TERMINAL BOARD
225	3-675-727-00	o	DECK, BRUSH
226	3-675-728-00	o	STUD, BRUSH SUPPORT
227	3-675-730-00	o	COVER, BRUSH
228	3-675-739-00	o	SPACER, INSULATING (2)
229	3-675-804-02	o	BRACKET, ADJUSTMENT PLATE
230	3-675-842-00	o	PLATE, ADJUSTMENT, CTL
231	3-675-846-00	o	BASE, CTL HEAD
232	3-677-715-03	o	PLATE (B), SHIELD, AT
233	3-677-794-00	o	SUPPORT, CAPSTAN
234	3-680-839-01	o	LEVER (2), C
235	X-3675-858-1	s	ROLLER SUB ASSY,C
237	3-683-567-00	o	GUARD, D.H
238	3-683-568-00	o	CASE (1), SHIELD
239	3-683-572-00	s	HOLDER (2), CONNECTOR
240	3-703-074-00	s	CAP 3, SHAFT
241	3-703-075-00	s	CAP 2, SHAFT
242	4-879-762-00	s	SPRING, COMPRESSION
243	8-825-544-20	s	HEAD, ERASE
245	8-825-554-73	s	HEAD, CTL (PS244-21A)
246	8-825-680-40	s	RING ASSY, SLIP
247	8-838-065-01	s	MOTOR, DC (BHF-1912A)(BVW-40)
	8-838-067-01	s	MOTOR, DC (BHF-1912B)(40P,40S)
248	3-683-633-01	o	PAD, FE CORE
249	3-680-844-01	o	SPACER
250	3-683-561-01	o	PLATE (2), ADJUSTMENT

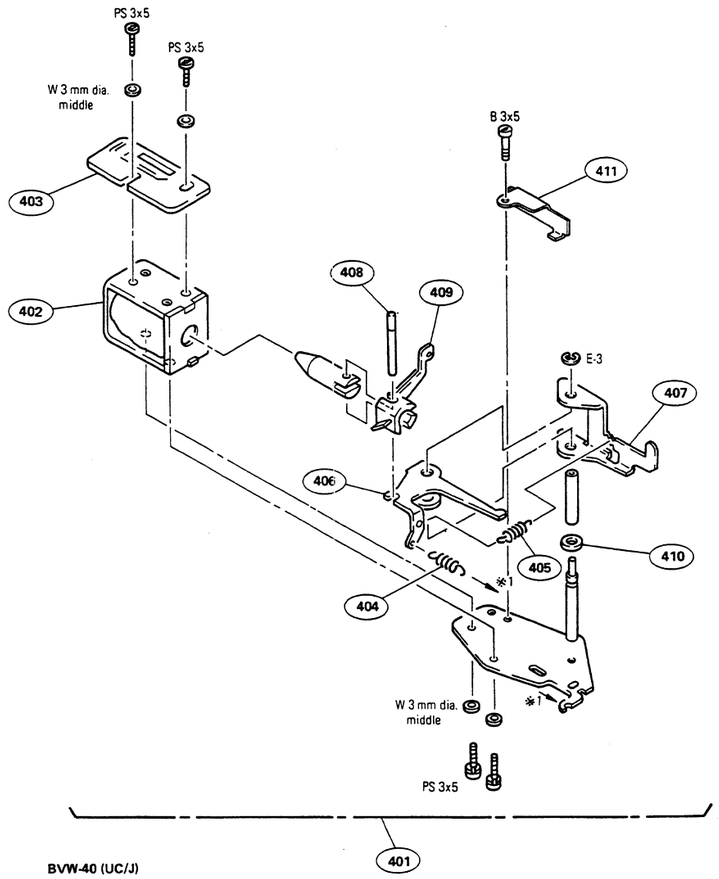
Threading Ring Block



BVW-40 (UC/J)
BVW-40P (AEP)
BVW-40S (AE)

No.	Parts No.	SP	Description
301	A-6750-153-H	o	RING ASSY, LOADING
302	X-3675-807-7	s	RING SUB ASSY, THREADING
303	X-3675-809-0	o	ROLLER (A) ASSY, RING
304	X-3675-810-0	o	ROLLER (B) ASSY, RING
305	X-3675-850-4	s	ARM ASSY, PINCH ROLLER
306	1-608-053-00	o	PRINTED CIRCUIT BOARD, LE-19
307	1-608-054-00	o	PRINTED CIRCUIT BOARD, PH-16
308	1-608-056-00	o	PRINTED CIRCUIT BOARD, HE-5
309	2-217-533-00	s	SPRING, COMPRESSION
310	2-270-601-00	o	SUPPORT
311	3-637-331-00	s	SPRING, COMPRESSION (L)
312	3-653-396-00	s	SPRING
313	3-653-487-00	o	BRACKET, RESISTOR
314	3-655-966-00	s	SPACER, STEP
315	3-669-443-00	s	BEARING, BALL
316	3-675-823-00	s	FLANGE, PRECEDING GUIDE
317	3-675-849-00	o	STOPPER, TAPE
318	3-675-862-03	o	BRACKET, DETECTION, ROTOR
319	3-677-718-05	s	ROLLER, PRECEDING GUIDE
320	3-680-803-00	o	LEVER
321	3-680-809-00	s	RETAINER, BEARING
322	3-680-810-00	s	ROLLER
323	3-680-811-00	s	FLANGE, UPPER
324	3-680-812-00	s	FLANGE, LOWER

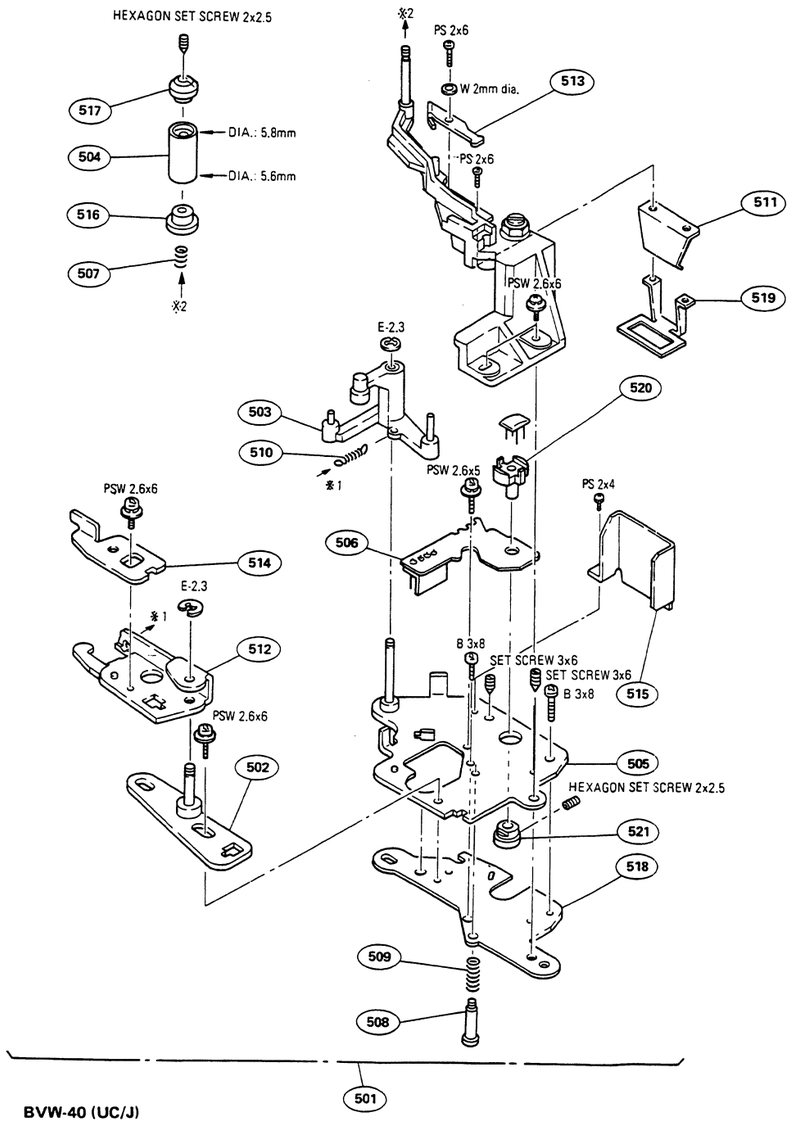
Pinch Press Mechanism Block



BVW-40 (UC/J)
BVW-40P (AEP)
BVW-40S (AE)

No.	Parts No.	SP	Description
401	A-6749-078-C	s	MECHA ASSY, PINCH PRESS
402	1-454-338-00	s	SOLENOID, PLUNGER "PINCH"
403	1-611-993-11	o	PRINTED CIRCUIT BOARD, PD-22
404	3-446-165-00	s	SPRING, TENSION
405	3-645-168-00	s	SPRING, TENSION
406	3-653-379-00	o	LEVER (A), PINCH COMPRESSION
407	3-653-380-02	o	LEVER (B), PINCH COMPRESSION
408	3-653-381-00	o	PIN, SOLENOID
409	3-653-383-00	o	STOPPER, SLACK SENSOR
410	3-701-441-21	s	WASHER, POLY 4MM DIA. (0.5T)
411	3-688-128-01	o	GUIDE,PINCH ARM (P :S/N 10391 AND LATER) (S :S/N 10011 AND LATER)

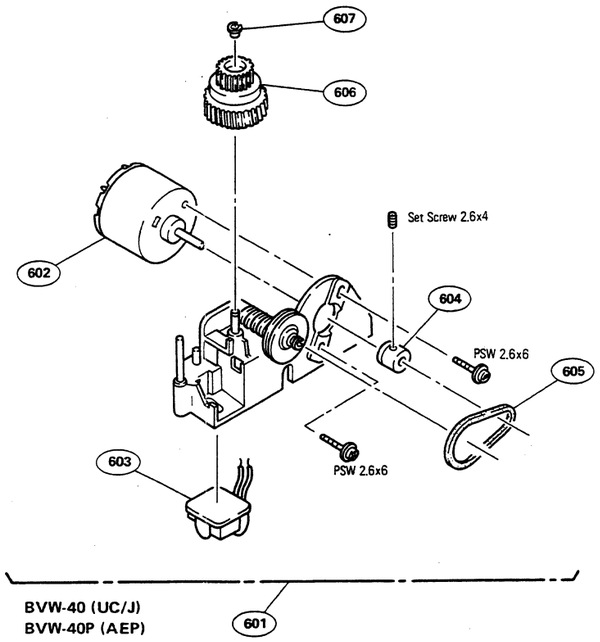
Supply Tension Regulator Block



BVW-40 (UC/J)
BVW-40P (AEP)

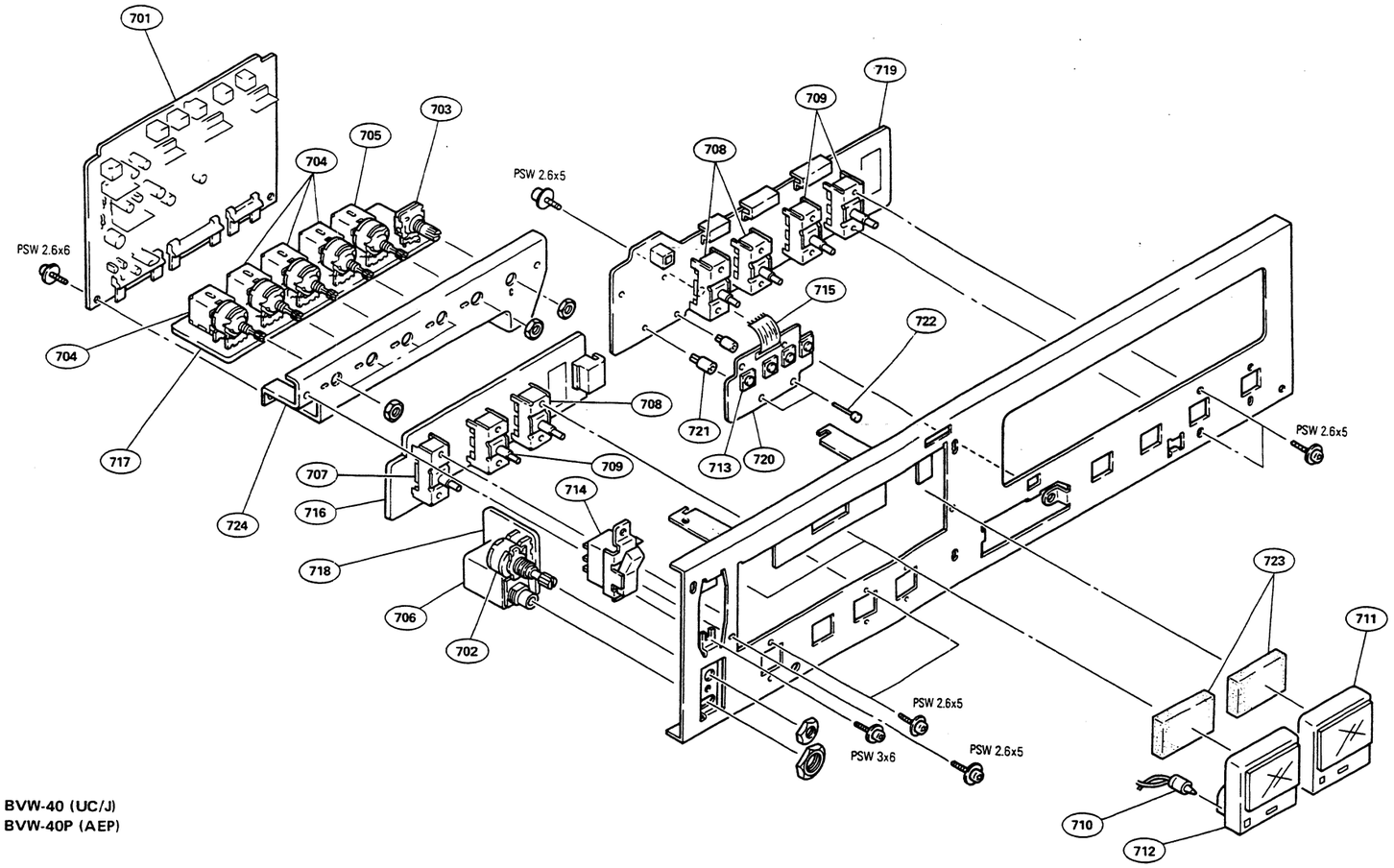
No.	Parts No.	SP	Description
501	A-6742-045-F	s	REGULATOR ASSY, TENSION
502	X-3675-828-2	o	HOOK ASSY, TENSION REGULATOR
503	X-3675-829-3	o	ARM ASSY, REWIND
504	X-3675-851-0	s	ROLLER ASSY, TR
505	X-3675-852-0	o	PLATE ASSY, ADJUSTMENT, TR
506	1-611-279-00	o	PRINTED CIRCUIT BOARD, TR-18
507	2-618-901-00	o	SPRING
508	3-437-173-02	o	SCREW, HEAD ADJUSTING
509	3-653-350-00	s	SPRING, COMPRESSION
510	3-680-860-01	s	SPRING, TENSION
511	3-675-872-00	o	SPRING, LEAF
512	3-675-880-00	o	ARM, HOOK, TENSION REGULATOR
513	3-675-882-00	o	PLATE, ADJUSTMENT, REWIND
514	3-675-883-00	o	PLATE, ADJUSTMENT, HOOK
515	3-675-885-02	o	PLATE, SHIELD, T-DME
516	3-677-749-03	s	RETAINER, B
517	3-677-752-00	s	NUT, ADJUSTMENT, T
518	3-680-824-00	o	BRACKET, TR
519	3-680-825-00	o	PROTECTOR
520	3-680-830-01	s	HOLDER, DME
521	3-680-831-00	o	COLLAR, DME

Gear Box Block



No.	Parts No.	SP	Description
601	A-6750-141-C	s	BOX ASSY, GEAR
602	1-541-163-00	s	MOTOR "THREADING"
603	1-585-913-00	o	PRINTED CIRCUIT BOARD, LM-4
604	3-653-386-00	o	PULLEY (2), LM
605	3-653-387-00	s	BELT, LM
606	3-653-388-00	s	GEAR, DRIVE
607	3-703-074-00	s	CAP 3, SHAFT

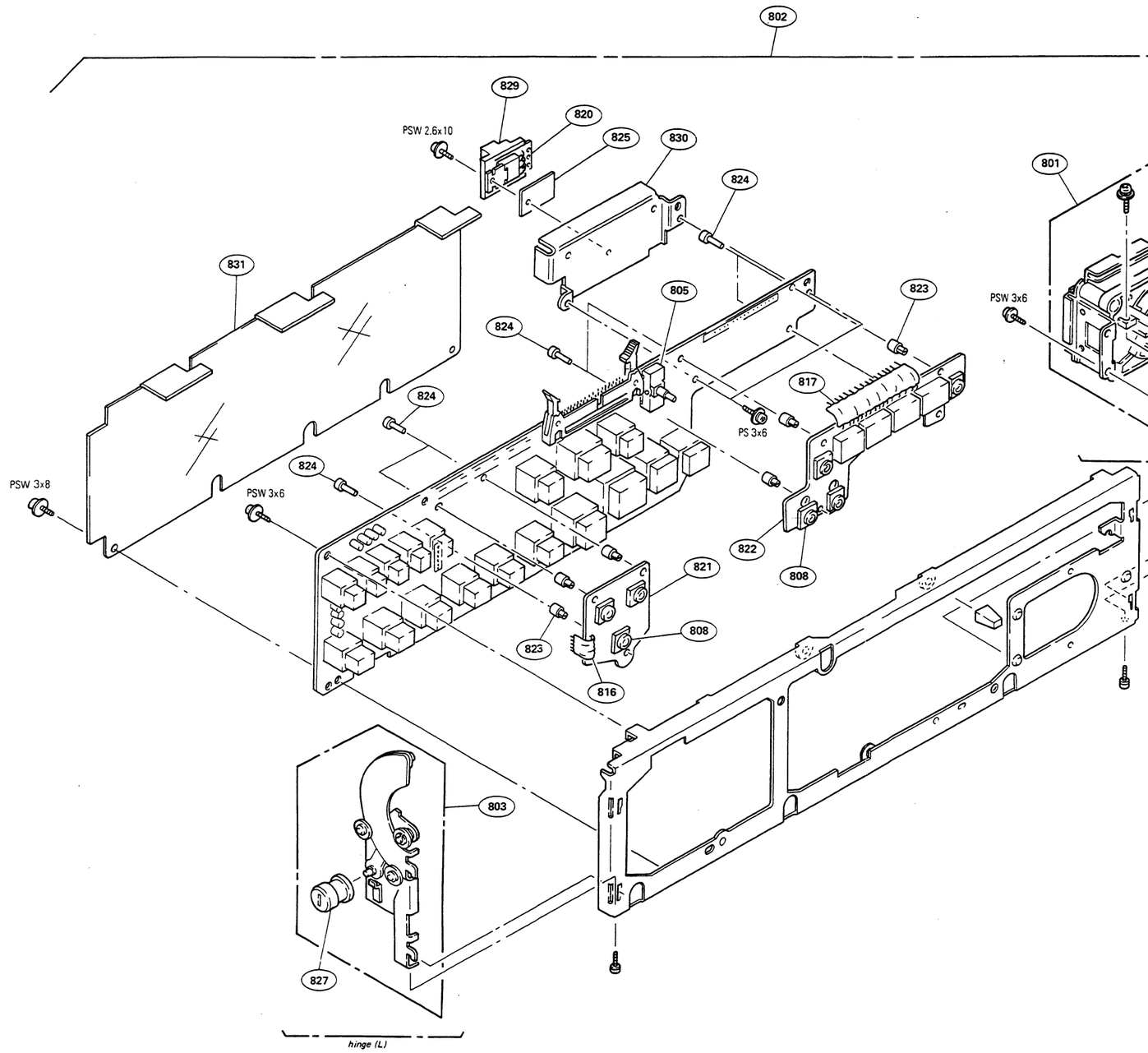
Level Control Chassis Block

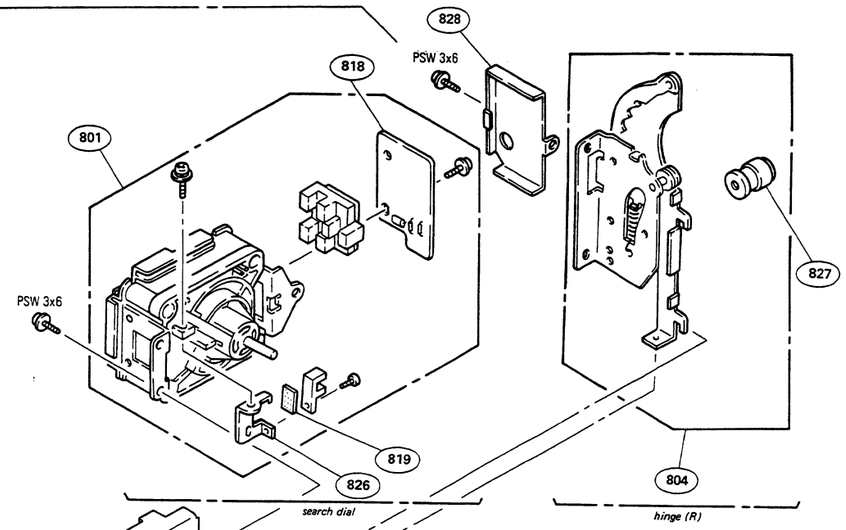


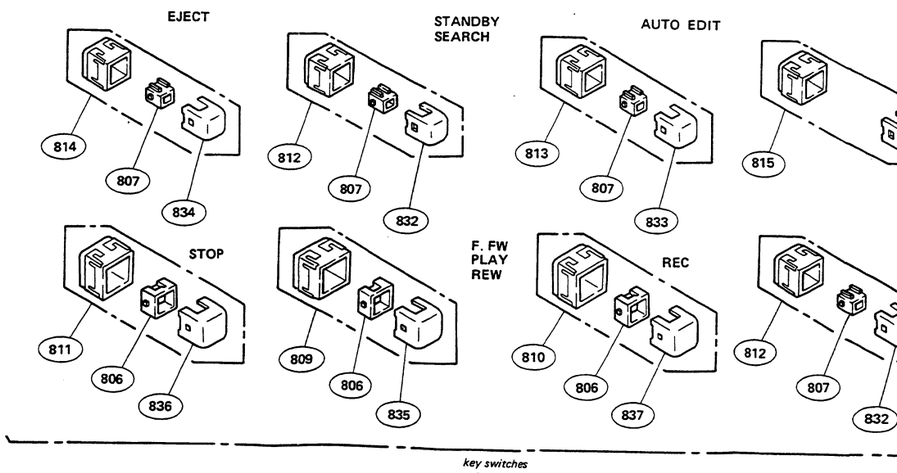
BVW-40 (UC/J)
BVW-40P (AEP)

No.	Parts No.	SP	Description
701	A-6713-189-A	o	MOUNTED CIRCUIT BOARD, BF-7
702	1-226-140-00	s	RES, VAR 20K/20K "HEADPHONES"
703	1-230-339-11	s	RES, VAR, CARBON 100K
704	1-230-340-11	s	RES, VAR, CARBON (WITH SW) 10K
705	1-230-341-11	s	RES, VAR, CARBON (WITH SW) 10K
706	1-507-553-00	s	JACK "HEADPHONES"
707	1-516-963-00	s	SWITCH, LEVER SLIDE
708	1-516-994-00	s	SWITCH, LEVER SLIDE
709	1-516-995-00	s	SWITCH, LEVER SLIDE
710	1-518-461-00	s	LAMP, PILOT
711	1-520-438-00	s	METER, VIDEO
712	1-520-439-00	s	METER, VU
713	1-552-539-00	s	SWITCH, KEY BOARD
⚠ 714	1-554-256-00	s	SWITCH, LOCKER
715	1-557-236-11	o	FLAT CABLE, 6P
716	1-611-543-00	o	PRINTED CIRCUIT BOARD, SW-6
717	1-611-544-00	o	PRINTED CIRCUIT BOARD, VR-10
718	1-611-545-00	o	PRINTED CIRCUIT BOARD, HP-11
719	1-611-546-00	o	PRINTED CIRCUIT BOARD, SW-7
720	1-611-547-00	o	PRINTEC CIRCUIT BOARD, SW-8
721	3-659-487-00	s	HOLDER, BUZZER
722	3-659-488-00	s	PIN, BUZZER HOLDER
723	3-677-141-00	o	CUSHION, METER
724	3-683-505-00	o	BRACKET, CONTROL

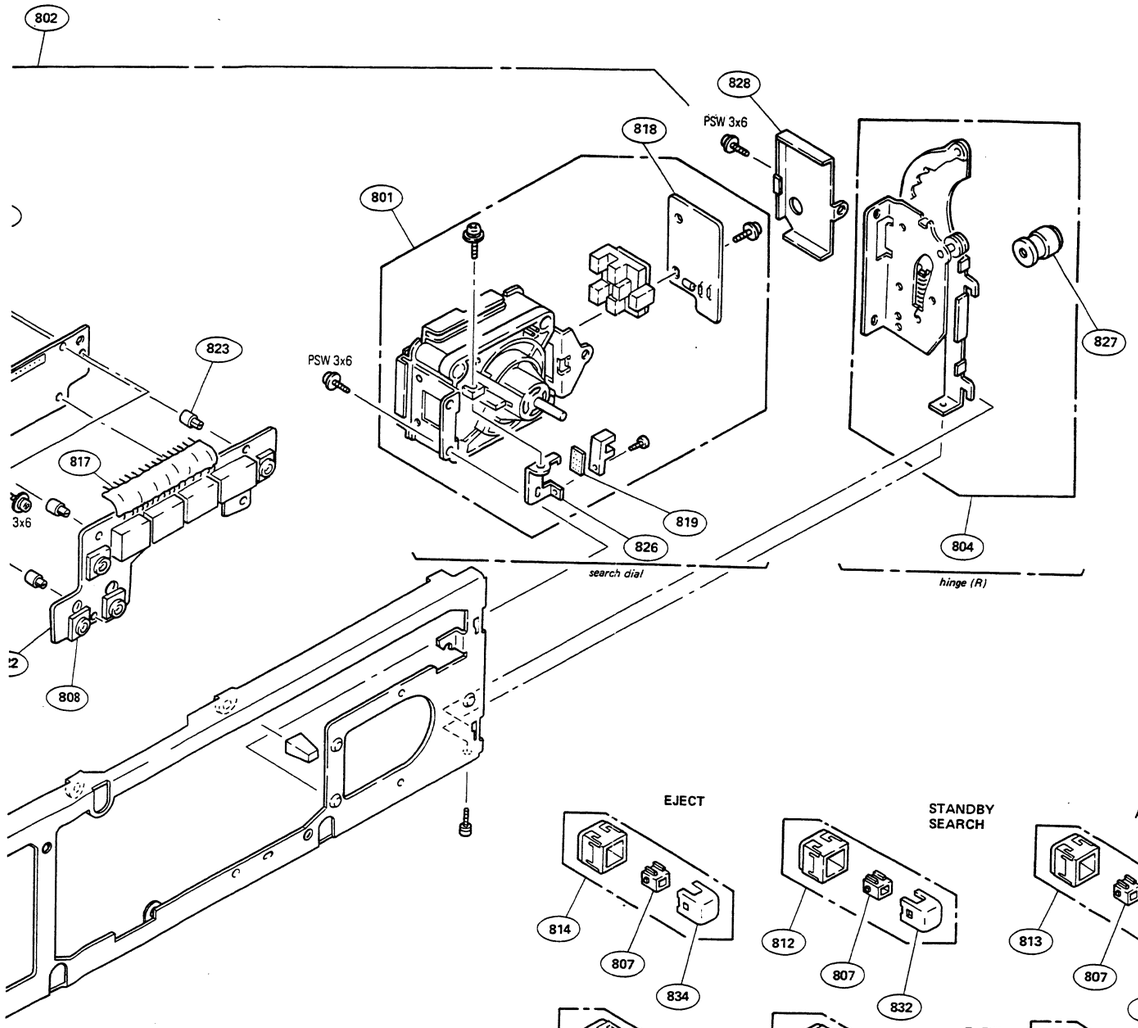
Function Control Chassis Block

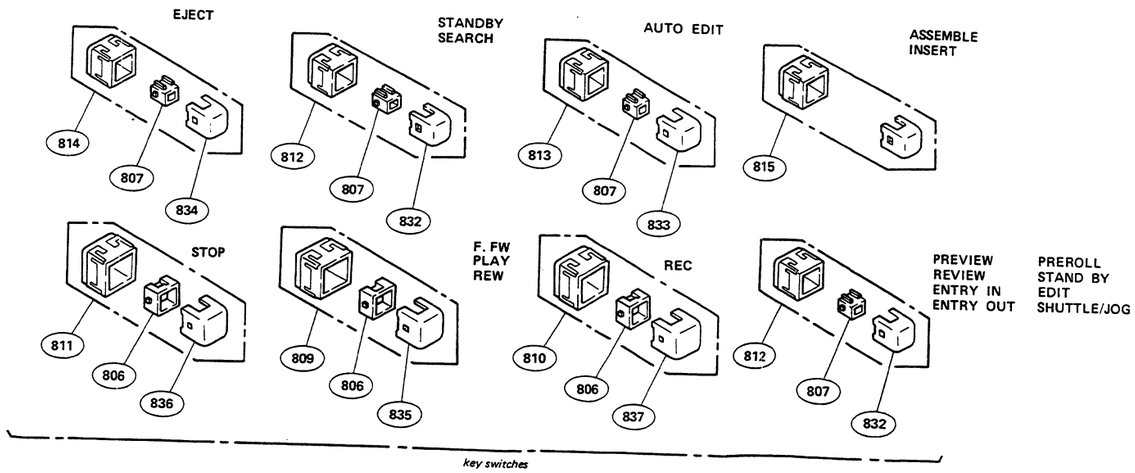






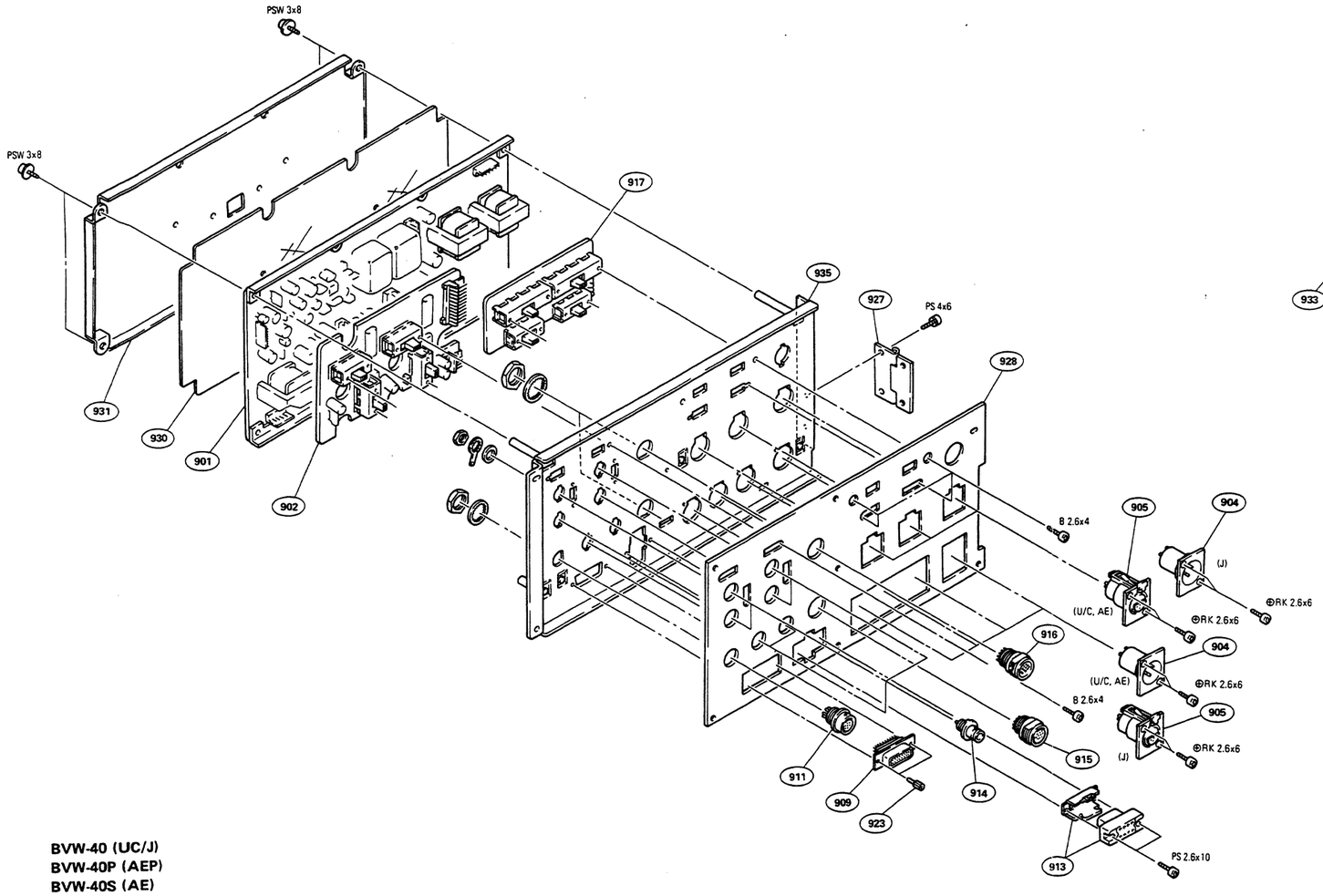
BVW-40 (UC/J)
BVW-40P (AEP)
BVW-40S (AE)



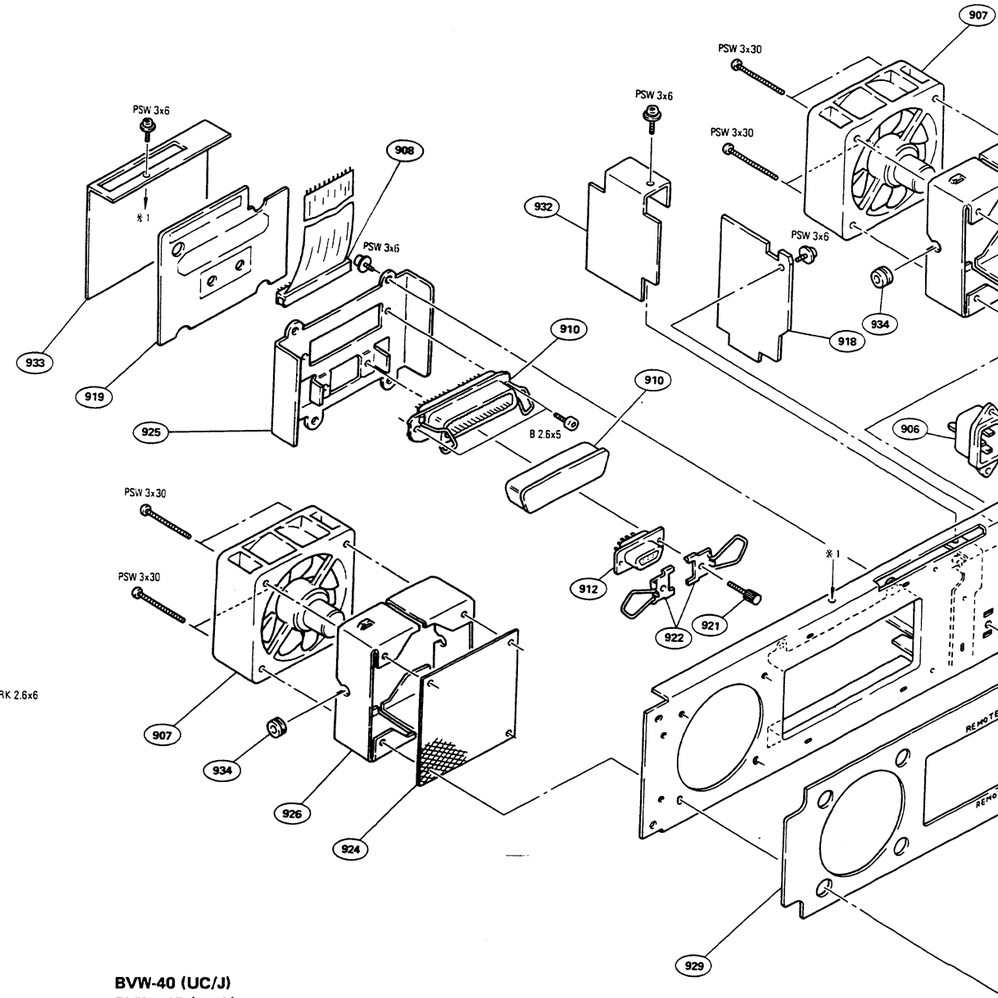


No.	Parts No.	SP	Description
801	A-6734-106-A	s	DIAL ASSY, SEARCH
802	A-6734-202-A	o	CHASSIS ASSY, KEY
803	A-6736-030-C	o	HINGE (LEFT) ASSY
804	A-6736-031-A	o	HINGE (RIGHT) ASSY
805	1-516-994-00	s	SWITCH, LEVER SLIDE
806	1-518-450-21	s	LAMP, PILOT
807	1-518-450-31	s	LAMP, PILOT
808	1-552-539-00	s	SWITCH, KEY BOARD
809	1-553-551-11	s	SWITCH, PUSH (17 SQUARE)
810	1-553-551-21	s	SWITCH, PUSH (17 SQUARE)
811	1-553-551-32	s	SWITCH, PUSH (17 SQUARE)
812	1-554-318-11	s	SWITCH, PUSH BUTTON (12 SQUARE)
813	1-554-318-21	s	SWITCH, PUSH BUTTON (12 SQUARE)
814	1-554-318-31	s	SWITCH, PUSH BUTTON (12 SQUARE)
815	1-554-708-11	s	SWITCH, PUSH (9 SQUARE)
816	1-557-236-11	o	FLAT CABLE 6P
817	1-557-237-11	o	FLAT CABLE 23P
818	1-604-351-00	o	PRINTED CIRCUIT BOARD, PC-9
819	1-604-353-00	o	PRINTED CIRCUIT BOARD, PC-14
820	1-605-018-00	o	PRINTED CIRCUIT BOARD, PT-9
821	1-611-550-00	o	PRINTED CIRCUIT BOARD, KY-47
822	1-611-551-00	o	PRINTED CIRCUIT BOARD, DP-31
823	3-659-487-00	s	HOLDER, BUZZER
824	3-659-488-00	s	PIN, BUZZER HOLDER
825	3-660-978-00	s	SHEET, HEAT RESISTING
826	3-668-151-00	o	BRACKET, PC14
827	3-668-407-00	o	NUT, LOCK
828	3-668-417-00	o	COVER, PROTECTION, PC9
829	3-669-904-00	o	HOLDER, PT
830	3-683-513-00	o	HEAT SINK, KY
831	3-683-619-01	o	COVER, KEY PANEL
832	3-706-480-01	s	KEY TOP (WHITE)
833	3-706-480-12	s	KEY TOP (RED)
834	3-706-480-22	s	KEY TOP (BLUE)
835	3-706-481-01	s	KEY TOP
836	3-706-481-22	s	KEY TOP
837	3-706-481-11	s	KEY TOP (RED)

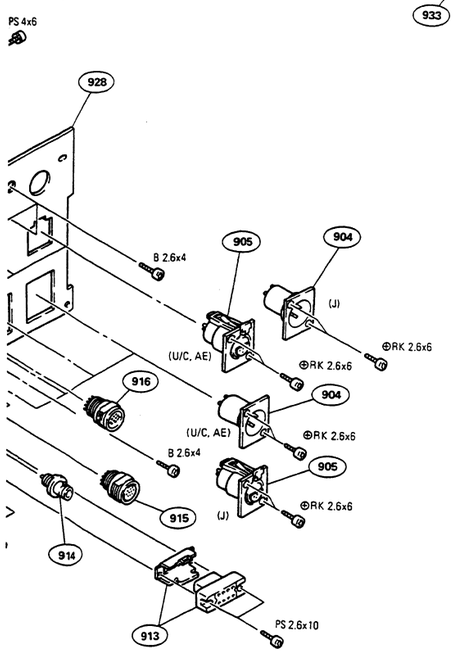
Connector Panel Block

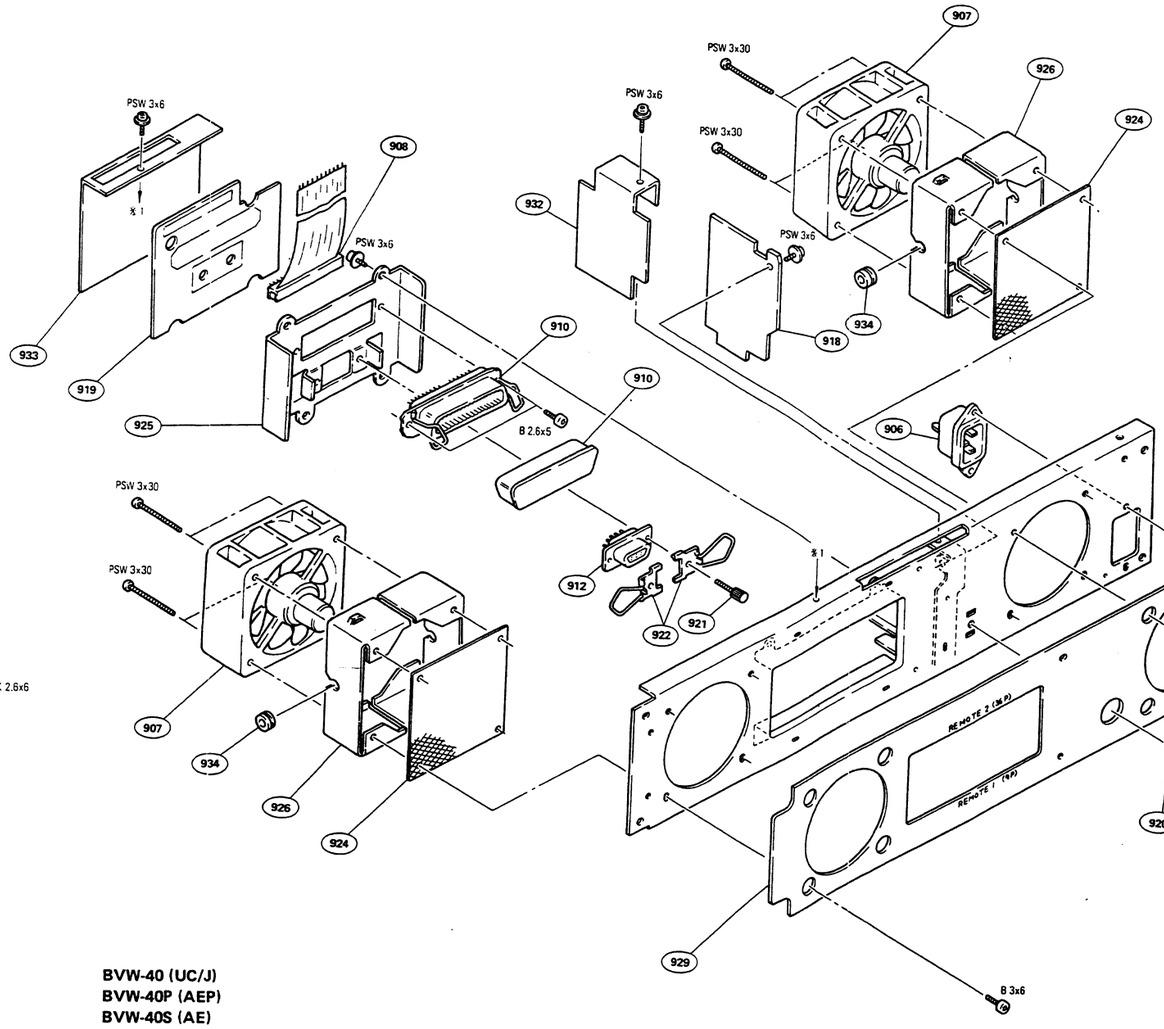


BVW-40 (UC/J)
BVW-40P (AEP)
BVW-40S (AE)



BVW-40 (UC/J)
BVW-40P (AEP)
BVW-40S (AE)

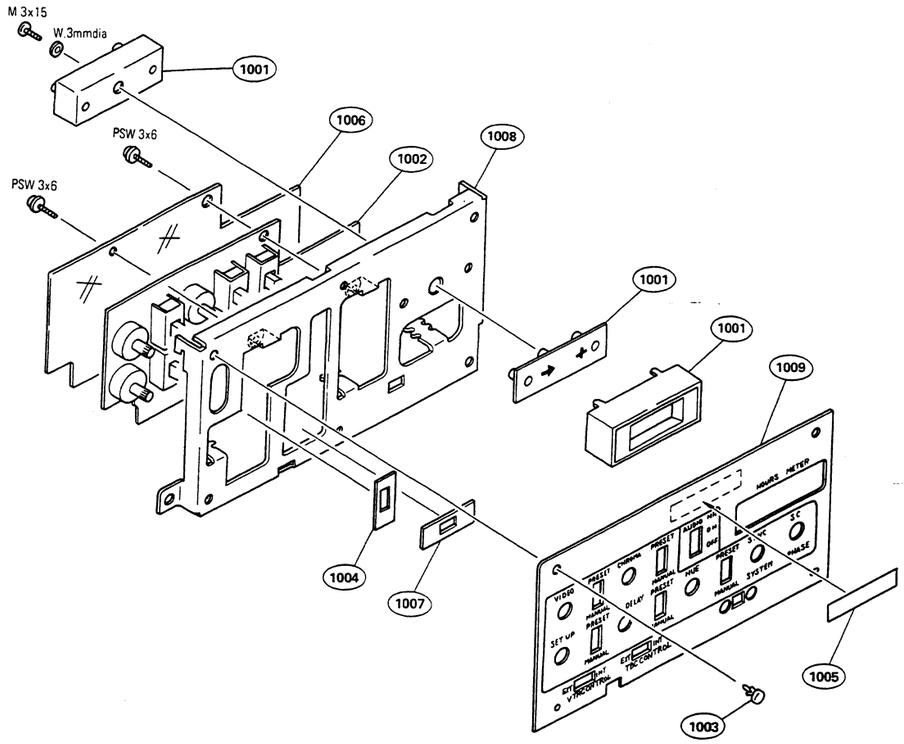




BVW-40 (UC/J)
BVW-40P (AEP)
BVW-40S (AE)

No.	Parts No.	SP	Description
901	A-6713-190-A	o	MOUNTED CIRCUIT BOARD, CP-61
902	A-6715-213-A	o	MOUNTED CIRCUIT BOARD, CP-62
903	X-2068-004-0	s	TERMINAL ASSY
904	1-509-176-51	s	RECEPTACLE, XLR, 3P (MALE)
905	1-509-184-51	s	RECEPTACLE, XLR, 3P (FEMALE)
⚠906	1-509-546-00	s	3P INLET
907	1-541-240-00	s	MOTOR, FAN (DC)
908	1-557-233-11	o	FLAT CABLE ASSY, 40P
909	1-564-600-11	s	RECEPTACLE, 15P, MALE "TBC REMOTE IN"
910	1-561-028-00	s	RECEPTACLE, 36P, "REMOTE-2"
911	1-561-045-00	s	RECEPTACLE, 7P, FEMALE "DUB U-matic OUT"
912	1-561-655-00	s	RECEPTACLE, 9P, "REMOTE-1"
913	1-509-095-00	s	RECEPTACLE, 8P "MONITOR OUT"
914	1-561-781-41	s	RECEPTACLE, BNC
915	1-562-160-00	s	RECEPTACLE, 12P, FEMALE "DUB/COMPONENT OUT"
916	1-564-407-11	s	RECEPTACLE, 12P, MALE "DUB/COMPONENT IN"
917	1-611-539-00	o	PRINTED CIRCUIT BOARD, SW-13
918	1-611-540-00	o	PRINTED CIRCUIT BOARD, AC-44
919	1-611-541-00	o	PRINTED CIRCUIT BOARD, RM-24
920	2-068-008-00	s	WASHER
921	3-668-459-00	o	SCREW, CONNECTOR
922	3-668-460-00	o	SPRING
923	3-673-910-00	o	SCREW, CONNECTOR
924	3-675-898-00	o	PLATE, VENTILATION
925	3-675-899-00	o	BRACKET, RE
926	3-683-523-00	o	BRACKET, FAN
927	3-683-559-00	o	HINGE
928	3-683-587-06	o	PLATE, ORNAMENTAL, CONNECTOR (BVW-40)
	3-683-587-16	o	PLATE, ORNAMENTAL, CONNECTOR (40P,40S)
929	3-683-597-01	o	PLATE, ORNAMENTAL, REAR
930	3-683-608-01	o	SHEET, INSULATING, CP
931	3-683-609-01	o	PROTECTOR, CP
932	3-683-610-01	o	PROTECTOR, AC
933	3-683-611-01	o	PROTECTOR, RM
934	3-815-122-00	o	BUSHING, RUBBER
935	X-3683-513-6	s	PANEL SUB ASSY,CONNECTOR

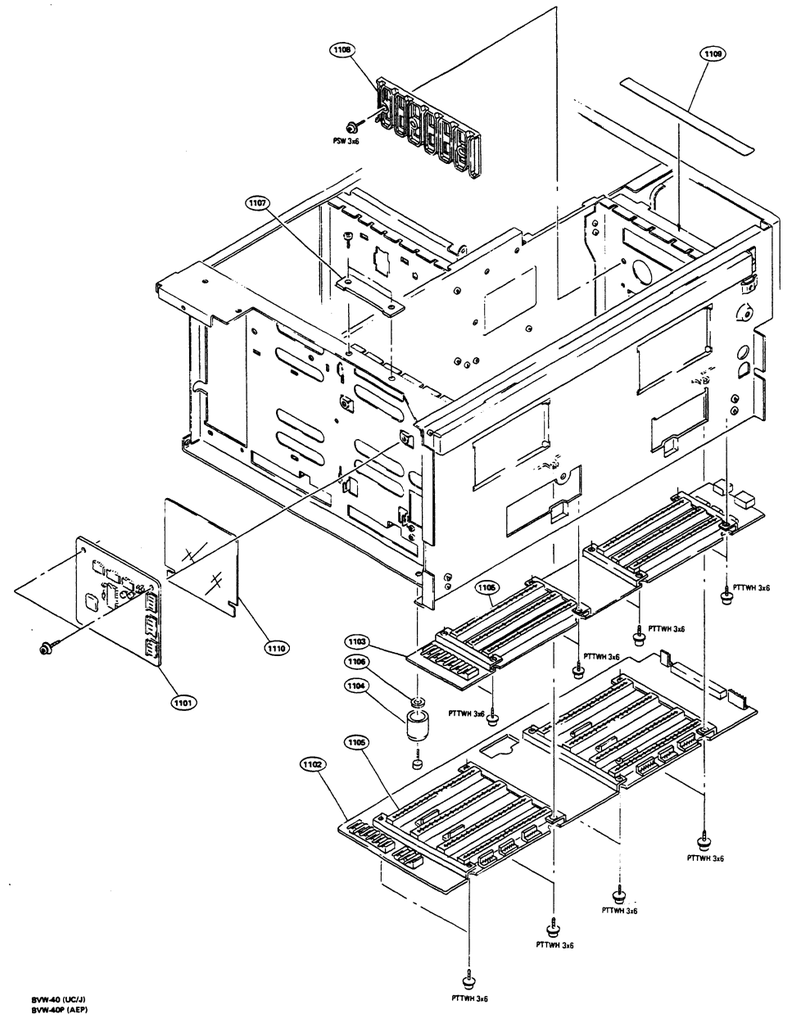
TBC Control Block



BVW-40 (UC/J)
BVW-40P (AEP)

No.	Parts No.	SP	Description
1001	1-548-100-11	s	HOURS METER
1002	1-611-548-13	o	PRINTED CIRCUIT BOARD, CP-74
1003	3-531-576-01	s	RIVET
1004	3-677-727-00	s	PLATE, SWITCH
1005	3-678-782-00	o	LABEL, DOLBY (C)
1006	3-683-524-00	o	COVER, ST
1007	3-683-525-00	o	PLATE (LARGE), SWITCH
1008	3-683-539-00	o	BRACKET, ST
1009	3-683-630-01	o	PLATE (P), ORNAMENTAL, ST

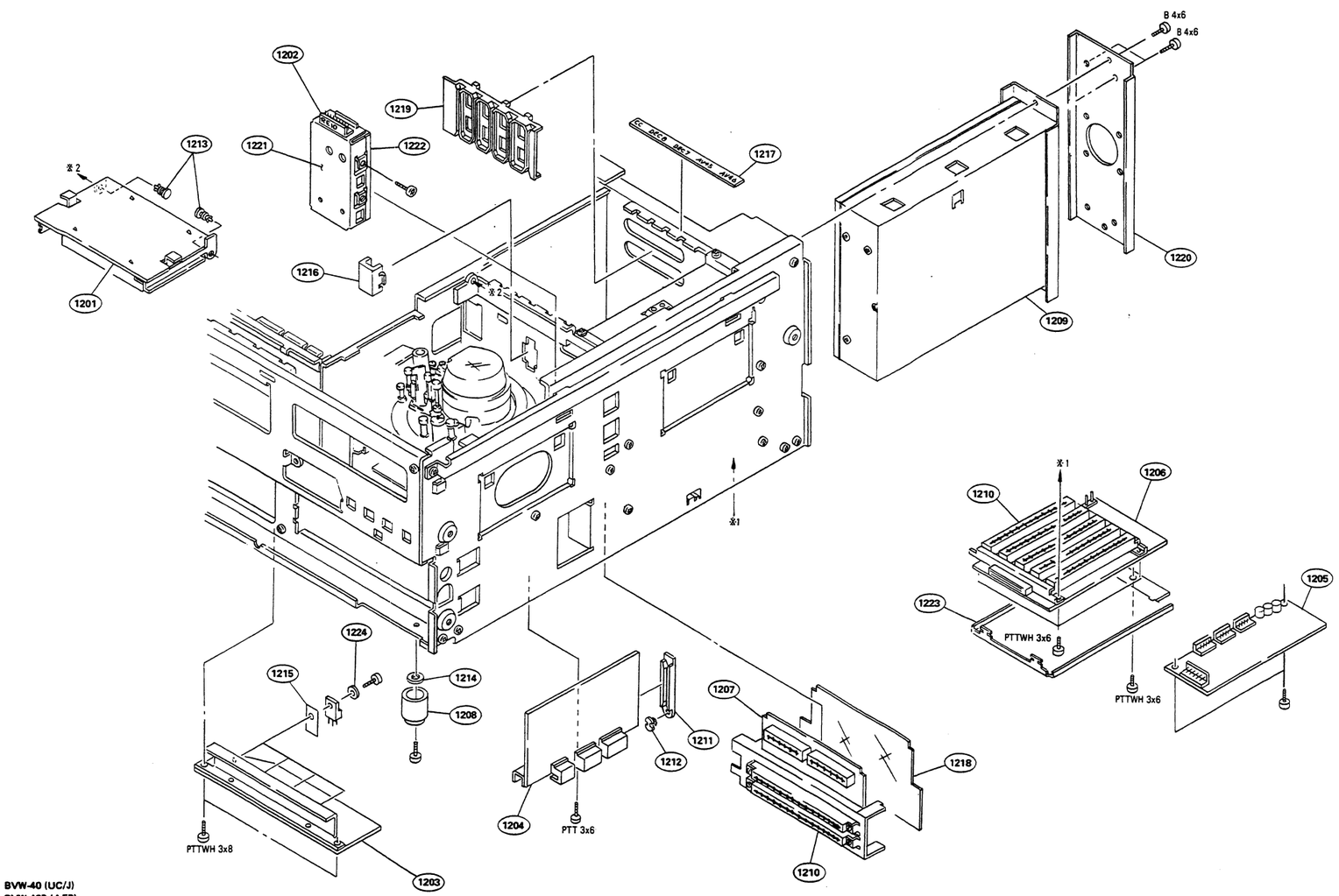
Chassis Block (1)



BVW-40 (UC/J)
BVW-40P (AEP)

No.	Parts No.	SP	Description
1101	A-6711-529-A	o	MOUNTED CIRCUIT BOARD, SD-6P
1102	A-6728-920-C	o	MOUNTED CIRCUIT BOARD, MB-49
1103	A-6728-923-A	o	MOUNTED CIRCUIT BOARD, MB-73
1104	3-642-656-01	s	FOOT
1105	1-560-919-11	o	CONNECTOR, CARD 60P
1106	3-650-537-00	o	WASHER
1107	3-668-424-00	o	RETAINER (REAR), FC
1108	3-683-530-00	o	GUIDE (L), PCB
1109	3-683-578-01	o	LABEL (I), PC BOARD
1110	3-683-607-01	o	SHEET, INSULATING, SD

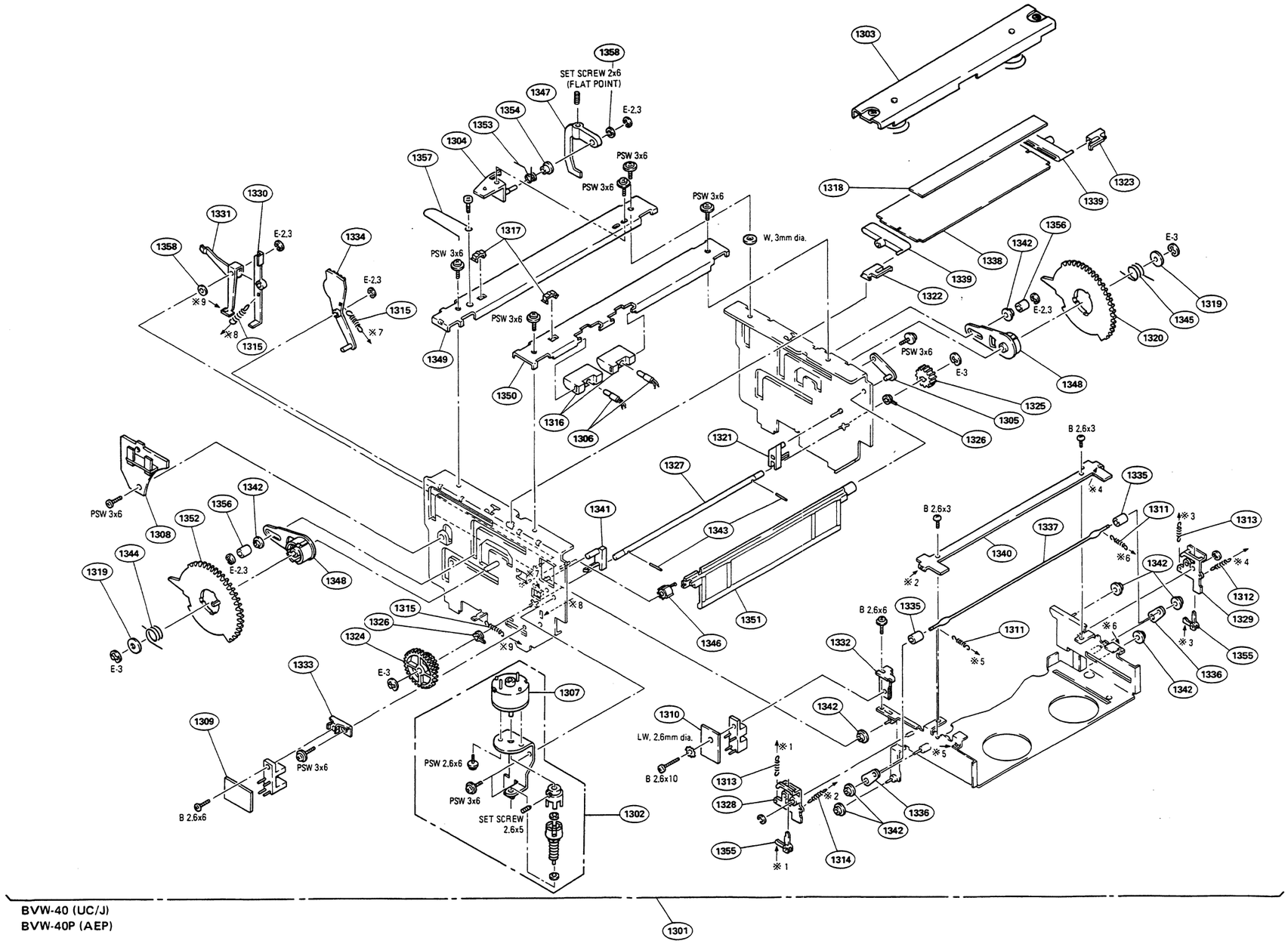
Chassis Block (2)



No.	Parts No.	SP	Description
1201	A-6711-515-B	o	MOUNTED CIRCUIT BOARD, RP-15P
1202	A-6711-495-B	o	MOUNTED CIRCUIT BOARD, RE-10
1203	A-6715-212-A	o	MOUNTED CIRCUIT BOARD, RD-2
1204	A-6717-343-A	o	MOUNTED CIRCUIT BOARD, BC-5
1205	A-6717-344-A	o	MOUNTED CIRCUIT BOARD, BC-6
1206	A-6728-921-C	o	MOUNTED CIRCUIT BOARD, MB-50
1207	A-6728-922-A	o	MOUNTED CIRCUIT BOARD, MB-52
1208	3-642-656-01	s	FOOT
⚠ 1209	1-413-166-11	s	SWITCHING REGULATOR (UR-09)
1210	1-561-654-00	o	CONNECTOR, CARD 86P
1211	2-234-447-00	o	GUIDE, CHASSIS
1212	3-637-219-00	o	GUIDE HOOK, CIRCUIT BOARD
1213	3-646-090-00	s	RIVET, NYLON
1214	3-650-537-00	o	WASHER
1215	3-660-978-00	s	SHEET, HEAT RESISTING
1216	3-677-741-00	o	GUARD, AIR
1217	3-683-512-00	o	LABEL (2), PC BOARD
1218	3-683-520-00	o	PROTECTOR, MB-52
1219	3-683-532-00	o	GUIDE (S), PC BOARD
1220	3-683-538-00	o	PANEL, POWER
1221	3-683-580-01	o	CASE (A), RE
1222	3-683-581-01	o	CASE (B), RE
1223	3-683-591-01	o	PROTECTOR, MB-50
1224	4-026-252-00	o	WASHER, INSULATING

BVW-40 (UC/J)
BVW-40P (AEP)
BVW-40S (AE)

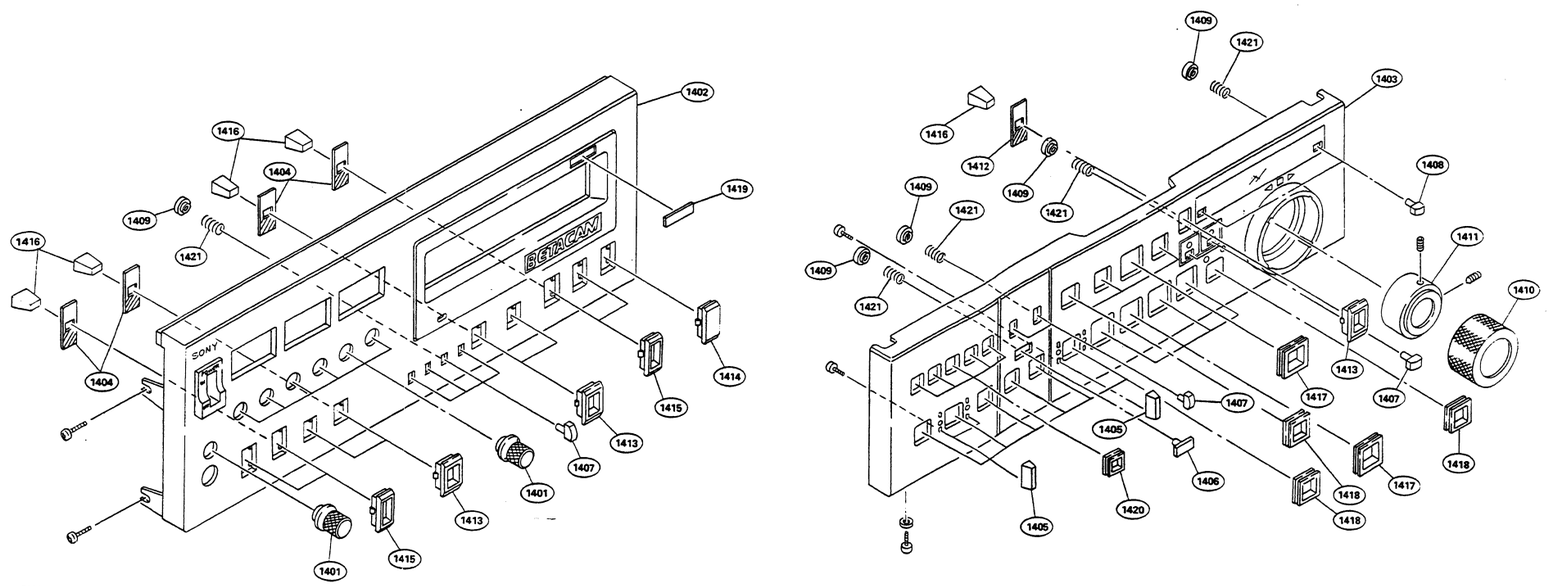
Cassette-up Compartment



BVW-40 (UC/J)
BVW-40P (AEP)

No.	Parts No.	SP	Description
1301	A-6751-151-F	s	CASSETTE COMPARTMENT ASSY
1302	A-6751-170-A	s	MOTOR BLOCK ASSY
1303	X-3675-819-0	s	STAY ASSY, CASSETTE COMPARTMENT
1304	X-3675-820-0	o	BRACKET ASSY, LEVER
1305	X-3675-821-3	o	BRACKET ASSY, WINDOW
1306	1-518-508-00	s	LAMP, PILOT
1307	1-541-163-00	s	MOTOR "CASSETTE-UP"
1308	1-608-052-00	o	PRINTED CIRCUIT BOARD, CL-7
1309	1-608-070-00	o	PRINTED CIRCUIT BOARD, PC-17
1310	1-608-071-00	o	PRINTED CIRCUIT BOARD, PC-18
1311	3-465-159-XX	s	SPRING, TENSION (20T)
1312	3-563-104-00	s	SPRING, TENSION
1313	3-568-321-00	s	SPRING, TENSION
1314	3-578-389-00	s	SPRING, TENSION
1315	3-646-214-00	s	SPRING
1316	3-668-314-02	s	HOLDER, LAMP
1317	3-677-153-00	o	HOLDER
1318	3-677-154-00	o	PLATE, PREVENTION
1319	3-677-155-00	o	RETAINER, SPRING
1320	3-677-156-00	s	GEAR (R), DRIVING
1321	3-677-157-00	o	STOPPER (R), CASSETTE
1322	3-677-160-00	o	HINGE (LEFT)
1323	3-677-161-00	o	HINGE (RIGHT)
1324	3-677-165-03	s	GEAR, MIDWAY
1325	3-677-166-00	s	GEAR, JOINT
1326	3-677-167-00	o	BEARING
1327	3-677-168-00	o	JOINT
1328	3-677-171-00	s	LEVER (LEFT)
1329	3-677-172-00	o	LEVER (RIGHT)
1330	3-677-173-00	o	LEVER, DETECTION, CASSETTE
1331	3-677-174-00	o	LEVER, DETECTION, CASSETTE-DOWN
1332	3-677-175-00	o	BRACKET, IN SWITCH
1333	3-677-176-02	o	BRACKET, DOWN SWITCH
1334	3-677-177-00	s	ARM
1335	3-677-178-00	o	ROLLER, PRESS
1336	3-677-179-00	o	ARM, JOINT
1337	3-677-180-00	o	WIRE, PRESS
1338	3-677-181-00	o	REFLECTOR
1339	3-677-182-00	o	HOLDER, REFLECTOR
1340	3-677-184-00	o	JOINT (M)
1341	3-677-185-00	o	STOPPER (L), CASSETTE
1342	3-677-187-00	s	ROLLER, GUIDE
1343	3-677-193-00	o	PIN, STOPPER
1344	3-677-197-00	o	SPRING (LEFT)
1345	3-677-198-00	o	SPRING (R)
1346	3-677-199-03	s	GEAR
1347	3-677-704-03	s	LEVER
1348	3-677-706-00	s	ARM, DRIVING
1349	3-677-707-02	o	JOINT (R)
1350	3-677-708-00	o	JOINT (F)
1351	3-677-710-00	o	LID, CASSETTE
1352	3-677-711-00	s	GEAR (L), DRIVING
1353	3-677-726-00	o	SPRING
1354	3-677-748-00	o	COLLAR
1355	3-677-770-00	o	LEVER, SUB, DISCHARGE
1356	3-677-771-00	o	COLLAR, GUIDE ROLLER
1357	3-677-779-00	o	GUARD, HARNESS
1358	3-701-439-21	s	WASHER, POLY 3MM DIA. 0.5T

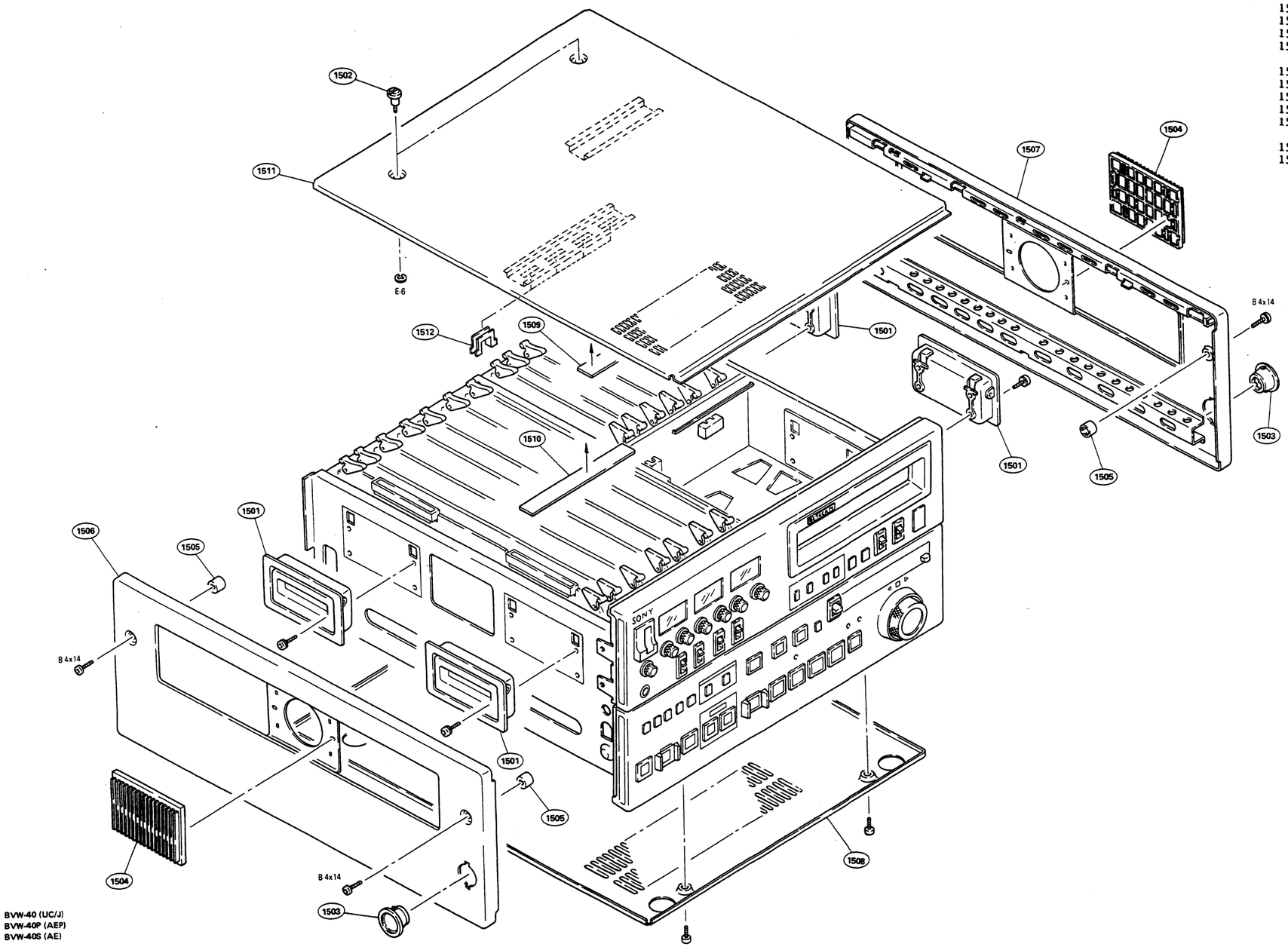
Ornamental Panel Block (1)



BVW-40 (UC/J)
BVW-40P (AEP)

No.	Parts No.	SP	Description
1401	X-3683-504-0	s	KNOB ASSY, CONTROL
1402	X-3683-505-0	o	PANEL SUB ASSY, FRONT
1403	X-3683-506-0	o	PANEL SUB ASSY, KEY
1404	2-252-623-00	o	PLATE, SWITCH, LEVER
1405	3-657-986-00	o	GUARD, REC
1406	3-668-006-02	s	PUSH BUTTON (15 x 8)
1407	3-668-007-02	s	PUSH BUTTON (5 x 9)
1408	3-668-008-02	s	PUSH BUTTON (3 x 5)
1409	3-668-009-02	s	PIN, PUSH BUTTON
1410	3-668-012-00	s	RUBBER, DIAL KNOB
1411	3-668-013-00	s	KNOB, DIAL
1412	3-668-015-00	o	PLATE (SMALL), SWITCH, LEVER
1413	3-668-016-00	o	FRAME (SMALL), ORNAMENTAL
1414	3-668-017-02	o	FRAME (MIDDLE), BLIND, SWITCH
1415	3-668-018-00	o	FRAME (MIDDLE), ORNAMENTAL
1416	3-668-028-00	s	KNOB (SMALL), LEVER SWITCH
1417	3-675-891-00	o	ESCUTCHEON, BUTTON (LARGE)
1418	3-675-892-00	o	ESCUTCHEON, BUTTON (SMALL)
1419	3-680-805-91	o	LABEL, MODEL NAME
1420	3-683-501-00	o	ESCUTCHEON (9 SQUARE), BUTTON
1421	4-309-349-00	s	SPRING, COIL

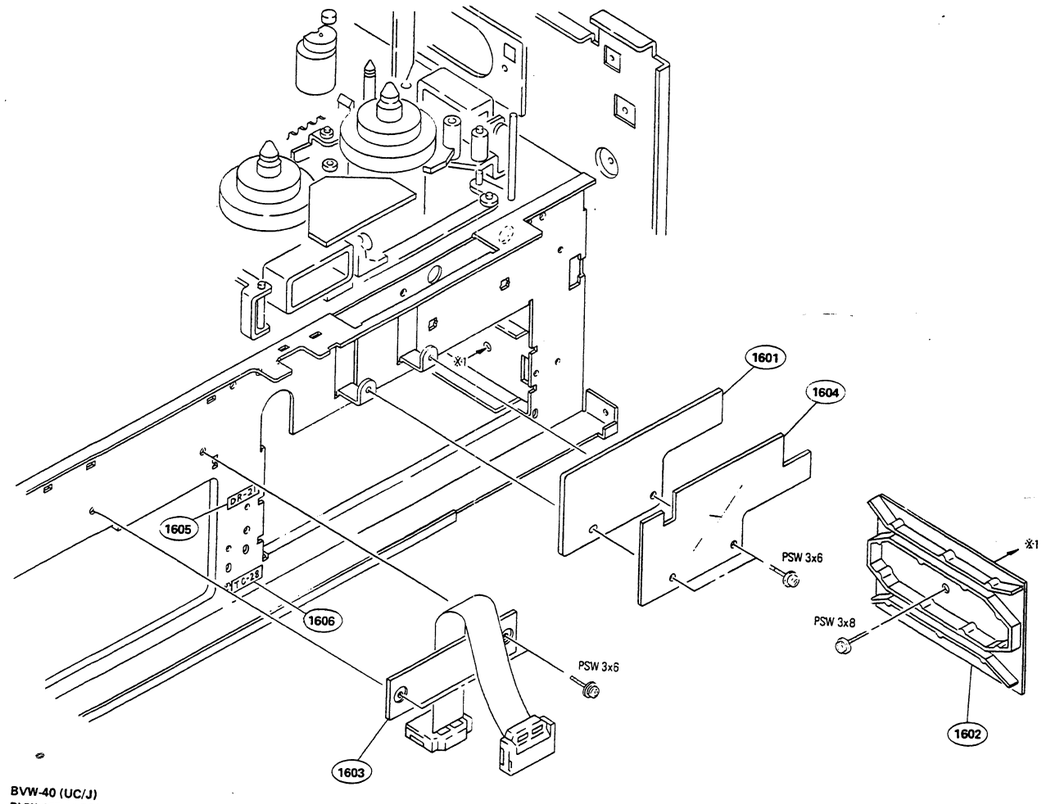
Ornamental Panel Block (2)



BVW-40 (UC/J)
BVW-40P (AEP)
BVW-40S (AE)

No.	Parts No.	SP	Description
1501	X-3642-018-0	s	HANDLE ASSY
1502	3-668-024-00	s	SCREW, COIN, CABINET
1503	3-668-025-06	o	ESCUTCHEON, HINGE STOPPER
1504	3-668-335-00	o	ORNAMENT, SIDE PLATE
1505	3-668-416-00	o	SPACER, BRACKET, M4
1506	3-668-418-04	o	PLATE, SIDE, LEFT
1507	3-668-419-04	o	PLATE, SIDE, RIGHT
1508	3-677-105-00	o	PLATE, BOTTOM
1509	3-683-588-01	o	RETAINER (S), PC
1510	3-683-589-01	o	RETAINER (L), PC
1511	3-683-590-03	o	LID, UPPER
1512	3-677-781-00	o	COVER, INSULATING UC:S/N 11071 AND LATER J :S/N 10526 AND LATER P :S/N 10791 AND LATER S :S/N 10011 AND LATER

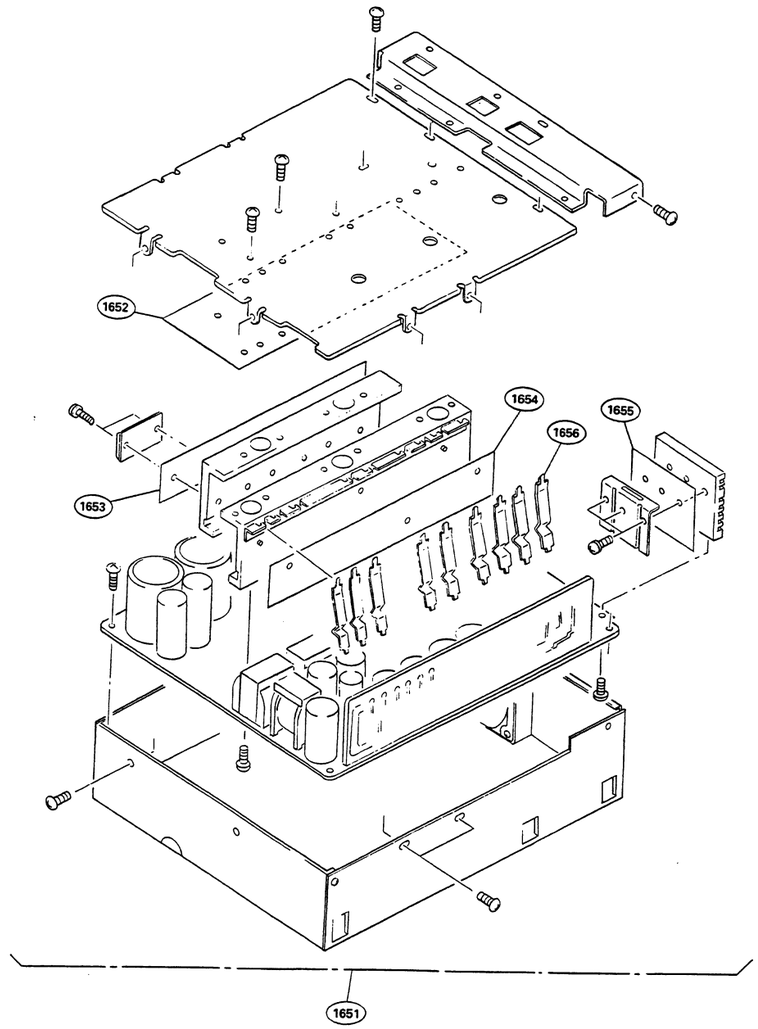
Printed Circuit Board Block (1)



BVW-40 (UC/J)
BVW-40P (AEP)
BVW-40S (AE)

No.	Parts No.	SP	Description
1601	A-6715-211-A	o	MOUNTED CIRCUIT BOARD, DU-53
1602	3-668-134-00	o	GUIDE (2), PC BOARD
1603	3-668-424-00	o	RETAINER (REAR), FC
1604	3-683-507-00	o	PROTECTOR, DU
1605	3-683-527-00	o	LABEL (3), PC BOARD
1606	3-683-528-00	o	LABEL (4), PC BOARD

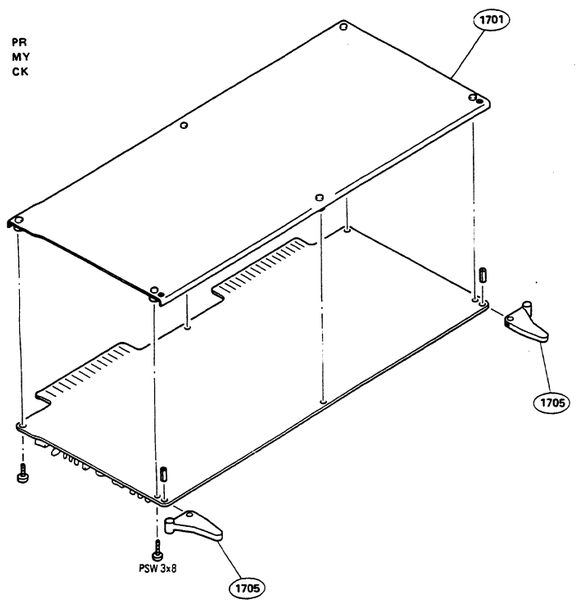
SWITCHING REGULATOR (UR-09)



No.	Parts No.	SP	Description
⚠ 1651	1-413-166-11	s	SWITCHING REGURATOR
1652	2-430-365-01	s	SILICON RUBBER
1653	2-430-366-01	s	THERCON
1654	2-430-367-01	s	SILICON RUBBER
1655	2-430-368-01	s	THERCON
1656	2-434-074-01	s	HOLDER

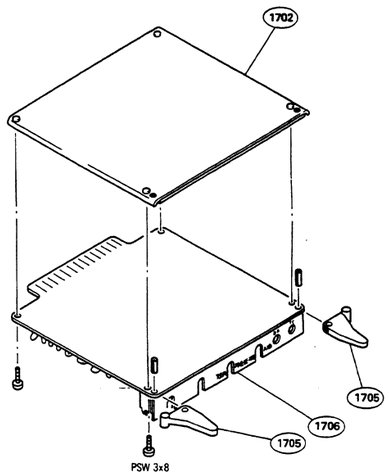
Printed Circuit Board Block (2)

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MY
CK

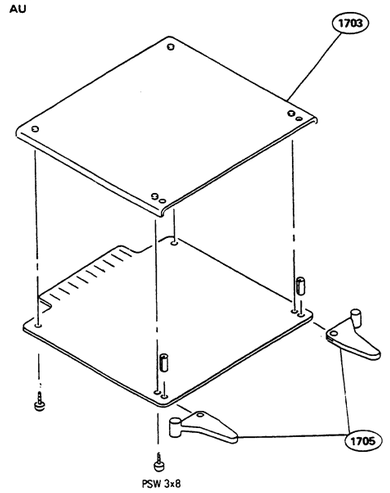


BVW-40 (UC/J)
BVW-40P (AEP)

TC-28

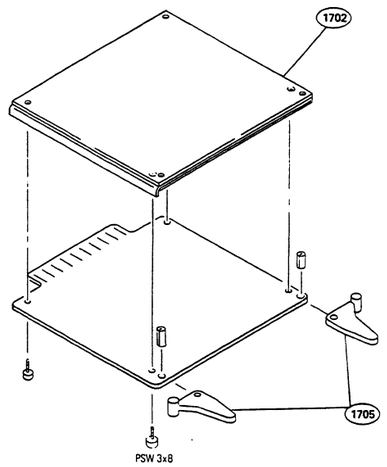


CC
DEC
AU

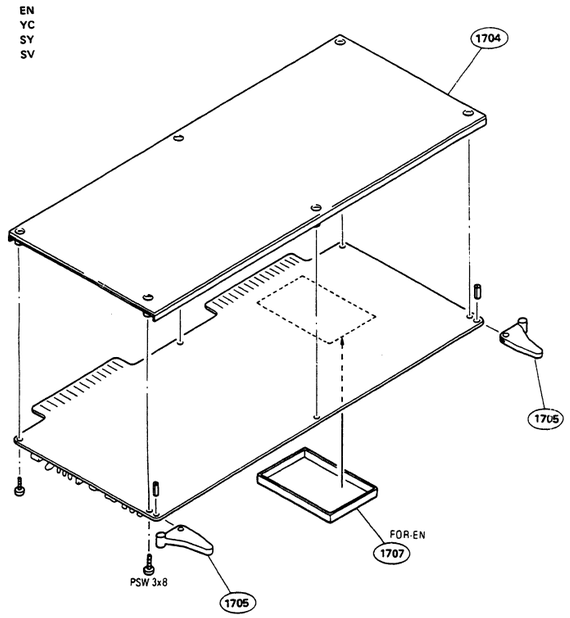


BVW-40 (UC/J)

DR-21



EN
YC
SY
SV



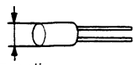
No.	Parts No.	SP	Description
1701	X-3675-813-0	o	PLATE ASSY, SHIELD, L
1702	X-3683-510-1	o	PLATE (LOWER) ASSY, SHIELD, S
1703	X-3683-511-1	o	PLATE (UPPER) ASSY, SHIELD, S
1704	X-3683-512-1	o	PLATE (LARGE) ASSY, SHIELD, L
1705	2-251-622-00	o	LEVER, PC BOARD
1706	3-683-579-01	o	PLATE, INDICATION, TC
1707	3-677-763-03	o	PLATE (L-2) SHIELD, EN

19-3. ELECTRICAL PARTS LIST

Parts that are <u>not</u> listed in the "reference numbers order list" are shown in following table.
Reference numbers are omitted.

MICRO INDUCTOR

1 μH through 470 μH
±5%



5mm dia

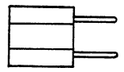
Parts No. 1-407-□□□-XX

Value	Parts No. -□□□-	Value	Parts No. -□□□-	Value	Parts No. -□□□-	Value	Parts No. -□□□-
1 μH	178	4.7 μH	186	22 μH	161	100 μH	169
1.2	179	5.6	187	27	162	120	170
1.5	180	6.8	188	33	163	150	171
1.8	181	8.2	189	39	164	180	172
2.2	182	10	157	47	165	220	173
2.7	183	12	158	56	166	270	174
3.3	184	15	159	68	167	330	175
3.9	185	18	160	82	168	390	176
						470	177

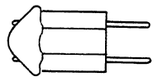
MICRO INDUCTOR

1 μH through 470 μH
±5%

-21



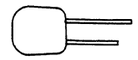
-00



Parts No. 1-408-□□□-□□

Value	Parts No. -□□□-	Value	Parts No. -□□□-	Value	Parts No. -□□□-	Value	Parts No. -□□□-
1 μH	397	4.7 μH	405	22 μH	413	100 μH	421
1.2	398	5.6	406	27	414	120	422
1.5	399	6.8	407	33	415	150	423
1.8	400	8.2	408	39	416	180	424
2.2	401	10	409	47	417	220	425
2.7	402	12	410	56	418	270	426
3.3	403	15	411	68	419	330	427
3.9	404	18	412	82	420	390	428
						470	429

SILVERED MICA CAPACITOR

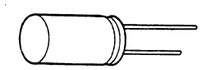


1 pF through 620 pF
±5%, 50WV

Parts No. 1-107-□□□-00

Value	Parts No. -□□□-	Value	Parts No. -□□□-	Value	Parts No. -□□□-	Value	Parts No. -□□□-
1 pF	098	15 pF	065	51 pF	078	180 pF	091
2	099	16	066	56	079	200	092
3	100	18	067	62	080	220	093
4	101	20	068	68	081	240	094
5	102	22	069	75	082	270	095
6	103	24	070	82	083	300	096
7	104	27	071	91	084	330	097
8	105	30	072	100	085	360	231
9	106	33	073	110	086	390	232
10	061	36	074	120	087	430	233
11	062	39	075	130	088	470	234
12	063	43	076	150	089	510	235
13	064	47	077	160	090	560	236
						620	237

ELECTROLYTIC CAPACITOR

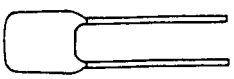


0.47μF through 470μF
6.3WV through 50 (63, 100)WV

Parts No. 1-123-□□□-00

Value	Parts No. -□□□-	Value	Parts No. -□□□-	Value	Parts No. -□□□-
0.47μF 50V		22μF 35V	342	100μF 50V	360
100	379	50		220 6.3	
1 50		63	371	10	308
100	380	33 6.3		16	321
2.2 50		10		25	334
100	381	16	318	35	346
3.3 25		25		50	361
35		35	343	330 6.3	
50		50		10	309
100	382	63	372	16	322
4.7 25		47 6.3		25	335
35		10	306	35	347
50		16		50	362
63	369	25	332	470 6.3	298
10 10		35		10	310
16		50	359	16	323
25		100 6.3		25	336
35		10	307	35	348
50	356	16		50	
22 16		25	333	63	377
25	330	35	345		

MYLAR CAPACITOR



0.00047μF through 0.22μF
±5% 50WV

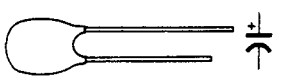
Parts No. 1-130-□□□-00

Value	Parts No. −□□□−
0.00047μF	467
0.00056	468
0.00068	469
0.00082	470
0.001	471
0.0012	472
0.0015	473
0.0018	474
0.0022	475
0.0027	476
0.0033	477

Value	Parts No. −□□□−
0.0039μF	478
0.0047	479
0.0056	480
0.0068	481
0.0082	482
0.01	483
0.012	484
0.015	485
0.018	486
0.022	487
0.027	488

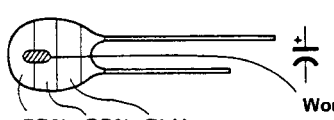
Value	Parts No. −□□□−
0.033μF	489
0.039	490
0.047	491
0.056	492
0.068	493
0.082	494
0.1	495
0.12	496
0.15	497
0.18	498
0.22	499

TANTALUM CAPACITOR



0.01μF through 100μF ± 10%
3.15V through 35V

NOTE: The value of the parts that are marked by * in the below table are indicated by color code. (to the value with ±20%)



Working Voltage Color Code

Ex. BRN GRN BLU
1 5 6

15×10^6 pF = 15μF

BLK	RED	YEL	GRN	BLU	GRY	WHT
10V	35	6.3	16	20	25	3.15

Parts No. 1-131-□□□-00

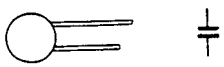
Value		Parts No. −□□□−
0.01μ	35V	*396
0.015	35	*397
0.022	35	*398
0.033	35	*399
0.047	35	*400
0.068	35	*401
0.1	35	341
0.15	35	342
0.22	35	343
0.33	25	*409
	35	344
0.47	20	*412
	35	345
0.68	16	*415
	25	*410
	35	346
1.0	10	*418
	25	498

Value		Parts No. −□□□−
1.0μ	35V	347
1.5	6.3	*421
	20	499
	25	354
	35	348
2.2	3.15	*424
	16	500
	20	361
	25	355
	35	349
3.3	10	501
	16	368
	20	362
	25	356
	35	350
4.7	6.3	502
	10	375
	16	369

Value		Parts No. −□□□−
4.7μ	20V	363
	25	357
	35	351
6.8	3.15	503
	6.3	382
	10	376
	16	370
	20	364
	25	358
	35	352
10	3.15	389
	6.3	383
	10	377
	16	371
	20	365
	25	359
	35	353
15	3.15	390
	6.3	384

Value		Parts No. −□□□−
15μ	10V	378
	16	372
	20	366
	25	360
22	3.15	391
	6.3	385
	10	379
	16	373
	20	367
33	3.15	392
	6.3	386
	10	380
	16	374
47	3.15	393
	6.3	387
	10	381
68	3.15	394
	6.3	388
100	3.15	395

CERAMIC CAPACITOR 0.001μF through 0.1μF
50WV

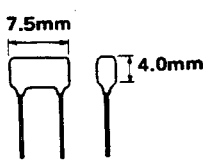


Parts NO. 1-161-□□□-00

Value	Parts No. -□□□-	Substitute
0.001 μF	039	(1-102-074-00)
0.0012	040	
0.0015	041	
0.0018	042	
0.0022	043	(1-102-100-00)
0.0027	044	
0.0033	045	
0.0039	046	(1-102-124-00)
0.0047	047	
0.0056	048	
0.0068	049	
0.0082	050	

Value	Parts No. -□□□-	Substitute
0.01 μF	051	(1-101-118-00)
0.012	052	
0.015	053	
0.018	054	
0.022	055	(1-101-005-00)
0.027	056	
0.033	057	
0.039	058	
0.047	059	(1-101-006-00)
0.056	060	
0.068	061	
0.082	062	
0.1	063	

METAL FILM RESISTOR ± 1%, 1/4W
10Ω through 100kΩ



Parts No. 1-214-□□□-00

Value	Parts No. -□□□-
10Ω	084
11	085
12	086
13	087
15	088
16	089
18	090
20	091
22	092
24	093
27	094
30	095
33	096
36	097
39	098
43	099
47	100
51	101
56	102
62	103
68	104
75	105
82	106
91	107

Value	Parts No. -□□□-
100Ω	108
110	109
120	110
130	111
150	112
160	113
180	114
200	115
220	116
240	117
270	118
300	119
330	120
360	121
390	122
430	123
470	124
510	125
560	126
620	127
680	128
750	129
820	130
910	131

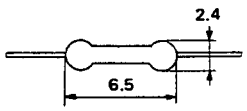
Value	Parts No. -□□□-
1.0kΩ	132
1.1	133
1.2	134
1.3	135
1.5	136
1.6	137
1.8	138
2.0	139
2.2	140
2.4	141
2.7	142
3.0	143
3.3	144
3.6	145
3.9	146
4.3	147
4.7	148
5.1	149
5.6	150
6.2	151
6.8	152
7.5	153
8.2	154
9.1	155

Value	Parts No. -□□□-
10kΩ	156
11	157
12	158
13	159
15	160
16	161
18	162
20	163
22	164
24	165
27	166
30	167
33	168
36	169
39	170
43	171
47	172
51	173
56	174
62	175
68	176
75	177
82	178
91	179
100	180

CARBON RESISTOR (1/4W)

±5%, 1/4W, non-special type
1 Ω through 1 MΩ





Parts No. 1-246-□□□-00

Value	Parts No. -□□□-	Value	Parts No. -□□□-	Value	Parts No. -□□□-	Value	Parts No. -□□□-
1 Ω	401	33 Ω	437	1 kΩ	473	33 kΩ	509
1.1	402	36	438	1.1	474	36	510
1.2	403	39	439	1.2	475	39	511
1.3	404	43	440	1.3	476	43	512
1.5	405	47	441	1.5	477	47	513
1.6	406	51	442	1.6	478	51	514
1.8	407	56	443	1.8	479	56	515
2	408	62	444	2	480	62	516
2.2	409	68	445	2.2	481	68	517
2.4	410	75	446	2.4	482	75	518
2.7	411	82	447	2.7	483	82	519
3	412	91	448	3.0	484	91	520
3.3	413	100 Ω	449	3.3	485	100 kΩ	521
3.6	414	110	450	3.6	486	110	522
3.9	415	120	451	3.9	487	120	523
4.3	416	130	452	4.3	488	130	524
4.7	417	150	453	4.7	489	150	525
5.1	418	160	454	5.1	490	160	526
5.6	419	180	455	5.6	491	180	527
6.2	420	200	456	6.2	492	200	528
6.8	421	220	457	6.8	493	220	529
7.5	422	240	458	7.5	494	240	530
8.2	423	270	459	8.2	495	270	531
9.1	424	300	460	9.1	496	300	532
10 Ω	425	330	461	10 kΩ	497	330	533
11	426	360	462	11	498	360	534
12	427	390	463	12	499	390	535
13	428	430	464	13	500	430	536
15	429	470	465	15	501	470	537
16	430	510	466	16	502	510	538
18	431	560	467	18	503	560	539
20	432	620	468	20	504	620	540
22	433	680	469	22	505	680	541
24	434	750	470	24	506	750	542
27	435	820	471	27	507	820	543
30	436	910	472	30	508	910	544
						1 MΩ	545

CARBON RESISTOR (1/8W)

±5%, 1/8W, non-special type
2.2Ω through 1MΩ



Parts No. 1-246-□□□-00

Value	Parts No. −□□□−
1Ω	−
1.1	−
1.2	−
1.3	−
1.5	−
1.6	−
1.8	−
2	−
2.2	751
2.4	812
2.7	752
3	813
3.3	753
3.6	814
3.9	754
4.3	815
4.7	755
5.1	816
5.6	756
6.2	817
6.8	757
7.5	818
8.2	758
9.1	819
10Ω	759
11	820
12	760
13	821
15	761
16	822
18	762
20	823
22	763
24	824
27	764
30	825

Value	Parts No. −□□□−
33Ω	765
36	826
39	766
43	827
47	767
51	828
56	768
62	829
68	769
75	830
82	770
91	831
100Ω	771
110	832
120	772
130	833
150	773
160	834
180	774
200	835
220	775
240	836
270	776
300	837
330	777
360	838
390	778
430	839
470	779
510	840
560	780
620	841
680	781
750	842
820	782
910	843

Value	Parts No. −□□□−
1kΩ	783
1.1	844
1.2	784
1.3	845
1.5	785
1.6	846
1.8	786
2	847
2.2	787
2.4	848
2.7	788
3.0	849
3.3	789
3.6	850
3.9	790
4.3	851
4.7	791
5.1	852
5.6	792
6.2	853
6.8	793
7.5	854
8.2	794
9.1	855
10kΩ	795
11	856
12	796
13	857
15	797
16	858
18	798
20	859
22	799
24	860
27	800
30	861

Value	Parts No. −□□□−
33kΩ	801
36	862
39	802
43	863
47	803
51	864
56	804
62	865
68	805
75	866
82	806
91	867
100kΩ	807
110	868
120	808
130	869
150	809
160	870
180	810
200	871
220	811

Parts No. 1-247-□□□-00

Value	Parts No. −□□□−
240kΩ	054
270	046
300	055
330	047
360	056
390	048
430	057
470	049
510	058
560	050
620	059
680	051
750	060
820	052
910	061
1MΩ	053

CARBON RESISTOR (1/6W)

±5%, 1/6W, non-special type
2.2Ω through 1MΩ

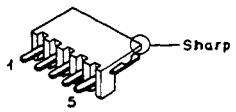


Parts No. 1-247-□□□-00

Value	Parts No. −□□□−	Value	Parts No. −□□□−	Value	Parts No. −□□□−	Value	Parts No. −□□□−
1Ω	–	36Ω	796	1.2kΩ	833	43kΩ	870
1.1	–	39	797	1.3	834	47	871
1.2	–	43	798	1.5	835	51	872
1.3	–	47	799	1.6	836	56	873
1.5	–	51	800	1.8	837	62	874
1.6	–	56	801	2	838	68	875
1.8	–	62	802	2.2	839	75	876
2	–	68	803	2.4	840	82	877
2.2	767	75	804	2.7	841	91	878
2.4	768	82	805	3	842	100kΩ	879
2.7	769	91	806	3.3	843	110	880
3	770	100Ω	807	3.6	844	120	881
3.3	771	110	808	3.9	845	130	882
3.6	772	120	809	4.3	846	150	883
3.9	773	130	810	4.7	847	160	884
4.3	774	150	811	5.1	848	180	885
4.7	775	160	812	5.6	849	200	886
5.1	776	180	813	6.2	850	220	887
5.6	777	200	814	6.8	851	240	888
6.2	778	220	815	7.5	852	270	889
6.8	779	240	816	8.2	853	300	890
7.5	780	270	817	9.1	854	330	891
8.2	781	300	818	10kΩ	855	360	892
9.1	782	330	819	11	856	390	893
10Ω	783	360	820	12	857	430	894
11	784	390	821	13	858	470	895
12	785	430	822	15	859	510	896
13	786	470	823	16	860	560	897
15	787	510	824	18	861	620	898
16	788	560	825	20	862	680	899
18	789	620	826	22	863	750	900
20	790	680	827	24	864	820	901
22	791	750	828	27	865	910	902
24	792	820	829	30	866	1MΩ	903
27	793	910	830	33	867		
30	794	1kΩ	831	36	868		
33	795	1.1	832	39	869		

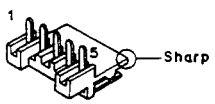
CONNECTOR

top-type receptacle



2P	1-508-900-00
3P	1-508-901-00
4P	1-508-902-00
5P	1-508-903-00
6P	1-508-904-00
8P	1-508-905-00
10P	1-508-906-00
12P	1-508-949-00

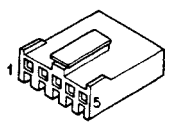
side-type receptacle



2P	1-508-933-00
3P	1-508-934-00
4P	1-508-950-00
5P	1-508-935-00
6P	1-508-936-00
8P	1-508-937-00
10P	1-508-951-00
12P	1-508-997-00

plug

housing



2P	1-509-983-00
3P	1-509-984-00
4P	1-509-985-00
5P	1-509-986-00
6P	1-509-987-00
8P	1-509-988-00
10P	1-509-989-00
12P	1-561-056-00

contact



1-509-982-00

ABBREVIATIONS

Ref. No.	Description
C□□, CV□□	CAPACITOR
CN□□	CONNECTOR
D□□	DIODE
DL□□	DELAY LINE
DM□□	DME
F□□	FUSE
FB□□	FERRITE BEAD
FL□□	FILTER

Ref. No.	Description
H□□	HEAD
IC□□	IC
J□□	JACK
L□□	INDUCTOR
M□□	MOTOR
PL□□	LAMP
PH□□	PHOTO INTERRUPTER
PM□□	SOLENOID

Ref. No.	Description
Q□□	TRANSISTOR
R□□, RV□□	RESISTOR
S□□, SW□□	SWITCH
T□□	TRANSFORMER
TH□□	THERMISTOR
X□□	CRYSTAL

All capacitors are in micro farads unless otherwise specified.

All inductors are in micro henries unless otherwise specified.

All resistors are in ohms.

Ref.No.	Parts No.	SP	Description
AC-44 BOARD			
	1-533-037-XX	s	HOLDER,FUSE
	1-611-540-00	o	PRINTED CIRCUIT BOARD,AC-44
⚠ C1	1-136-527-12	s	FILM 0.47 20% 250V
⚠ CN1	1-560-033-00	o	RECEPTACLE,3P
	1-561-218-00	o	HOUSING,3P
	1-561-254-00	o	CONTACT
⚠ F1	1-532-325-00	s	T6.3A 250V
⚠ L1	1-421-259-00	s	LINE FILTER
R1	1-202-727-00	s	RES,SOLID 4.7M 10% 1/2W
AU-45 BOARD			
	A-6713-187-A	o	MOUNTED CIRCUIT BOARD,AU-45
C101	1-124-186-00	s	ELECT 10 20% 50V
C102	1-124-186-00	s	ELECT 10 20% 50V
C104	1-124-186-00	s	ELECT 10 20% 50V
C105	1-107-210-00	s	MICA 22PF 5% 500V
C116	1-131-342-00	s	ELECT 0.15 10% 25V
C133	1-107-210-00	s	MICA 22PF 5% 500V
C141	1-107-210-00	s	MICA 22PF 5% 500V
C143	1-107-208-00	s	MICA 18PF 5% 500V
C201	1-124-186-00	s	ELECT 10 20% 50V
C202	1-124-186-00	s	ELECT 10 20% 50V
C204	1-124-186-00	s	ELECT 10 20% 50V
C205	1-107-210-00	s	MICA 22PF 5% 500V
C216	1-131-342-00	s	ELECT 0.15 10% 25V
C233	1-107-210-00	s	MICA 22PF 5% 500V
C243	1-107-208-00	s	MICA 18PF 5% 500V
C506	1-131-344-00	s	ELECT 0.33 10% 25V
C507	1-131-344-00	s	ELECT 0.33 10% 25V
C513	1-131-344-00	s	ELECT 0.33 10% 25V
C514	1-131-344-00	s	ELECT 0.33 10% 25V
D101	8-719-815-55	s	1S1555
D102	8-719-200-02	s	10E-2
D103	8-719-162-07	s	RD6.2E-B
D104	8-719-815-55	s	1S1555
D105	8-719-815-55	s	1S1555
D106	8-719-815-55	s	1S1555
D107	8-719-815-55	s	1S1555
D108	8-719-815-55	s	1S1555
D109	8-719-815-55	s	1S1555
D110	8-719-200-02	s	10E-2
D201	8-719-815-55	s	1S1555
D202	8-719-200-02	s	10E-2
D203	8-719-162-07	s	RD6.2E-B
D204	8-719-815-55	s	1S1555
D205	8-719-815-55	s	1S1555
D206	8-719-815-55	s	1S1555
D207	8-719-815-55	s	1S1555
D208	8-719-815-55	s	1S1555
D209	8-719-815-55	s	1S1555
IC101	8-759-700-04	s	NJM2043D-D(JRC)
IC102	8-741-134-32	s	BX1343A(SONY)
IC103	8-741-134-32	s	BX1343A(SONY)
IC104	8-741-115-20	s	BX1152(SONY)
IC105	8-759-745-61	s	NJM4560D-D(JRC)
IC106	8-759-745-61	s	NJM4560D-D(JRC)
IC107	8-759-700-04	s	NJM2043D-D(JRC)
IC201	8-759-700-04	s	NJM2043D-D(JRC)
IC202	8-741-134-32	s	BX1343A(SONY)
IC203	8-741-134-32	s	BX1343A(SONY)
IC204	8-741-115-20	s	BX1152(SONY)
IC205	8-759-745-61	s	NJM4560D-D(JRC)
IC206	8-759-745-61	s	NJM4560D-D(JRC)
IC502	8-759-178-05	s	uPC78L05(NEC)
IC504	8-759-179-05	s	uPC7905H(NEC)
LV101	1-459-434-00	s	VAR,22mH
LV102	1-459-434-00	s	VAR,22mH
LV201	1-459-434-00	s	VAR,22mH
LV202	1-459-434-00	s	VAR,22mH
Q101	8-720-002-97	s	TX429D-7
Q102	8-720-002-97	s	TX429D-7
Q103	8-729-201-05	s	2SC2878-B
Q104	8-720-002-97	s	TX429D-7
Q105	8-720-002-97	s	TX429D-7
Q106	8-729-663-48	s	2SC1364-8
Q107	8-729-663-48	s	2SC1364-8
Q108	8-729-663-48	s	2SC1364-8
Q109	8-729-663-48	s	2SC1364-8
Q110	8-729-173-37	s	2SA733-P
Q111	8-729-663-48	s	2SC1364-8
Q112	8-729-173-37	s	2SA733-P
Q113	8-729-663-48	s	2SC1364-8
Q114	8-729-173-37	s	2SA733-P
Q115	8-729-663-48	s	2SC1364-8
Q116	8-729-173-37	s	2SA733-P
Q117	8-729-201-05	s	2SC2878-B
Q118	8-729-201-05	s	2SC2878-B
Q201	8-720-002-97	s	TX429D-7
Q202	8-720-002-97	s	TX429D-7
Q203	8-729-201-05	s	2SC2878-B
Q204	8-720-002-97	s	TX429D-7
Q205	8-720-002-97	s	TX429D-7
Q206	8-729-663-48	s	2SC1364-8
Q207	8-729-663-48	s	2SC1364-8
Q208	8-729-663-48	s	2SC1364-8
Q209	8-729-663-48	s	2SC1364-8
Q210	8-729-173-37	s	2SA733-P
Q211	8-729-663-48	s	2SC1364-8
Q212	8-729-173-37	s	2SA733-P
Q213	8-729-663-48	s	2SC1364-8
Q214	8-729-173-37	s	2SA733-P
Q215	8-729-663-48	s	2SC1364-8
Q216	8-729-173-37	s	2SA733-P
Q217	8-729-201-05	s	2SC2878-B

Ref.No.	Parts No.	SP	Description
Q501	8-729-177-32	s	2SD773
Q503	8-729-113-32	s	2SB733
RV101	1-228-308-00	s	VAR,CERMET 10K
RV102	1-228-307-00	s	VAR,CERMET 5K
RV103	1-228-309-00	s	VAR,CERMET 20K
RV104	1-228-310-00	s	VAR,CERMET 50K
RV201	1-228-308-00	s	VAR,CERMET 10K
RV202	1-228-307-00	s	VAR,CERMET 5K
RV203	1-228-309-00	s	VAR,CERMET 20K
RV204	1-228-310-00	s	VAR,CERMET 50K

AU-46 BOARD

	A-6713-188-A	o	MOUNTED CIRCUIT BOARD,AU-46
C109	1-108-583-00	s	MYLAR 0.015 5% 50V
C110	1-107-210-00	s	MICA 22PF 5% 500V
C113	1-108-595-00	s	MYLAR 0.047 5% 50V
C114	1-124-186-00	s	ELECT 10 20% 50V
C115	1-108-569-00	s	MYLAR 0.0039 5% 50V
C117	1-108-595-00	s	MYLAR 0.047 5% 50V
C119	1-108-595-00	s	MYLAR 0.047 5% 50V
C124	1-108-567-00	s	MYLAR 0.0033 5% 50V
C129	1-108-565-00	s	MYLAR 0.0027 5% 50V
C130	1-108-603-00	s	MYLAR 0.1 5% 50V
C131	1-108-585-00	s	MYLAR 0.018 5% 50V
C133	1-107-179-00	s	MICA 270PF 5% 500V
C136	1-108-579-00	s	FILM 0.01 5% 50V
C209	1-108-583-00	s	MYLAR 0.015 5% 50V
C210	1-107-210-00	s	MICA 22PF 5% 500V
C213	1-108-595-00	s	MYLAR 0.047 5% 50V
C214	1-124-186-00	s	ELECT 10 20% 50V
C215	1-108-569-00	s	MYLAR 0.0039 5% 50V
C218	1-108-595-00	s	MYLAR 0.047 5% 50V
C220	1-108-595-00	s	MYLAR 0.047 5% 50V
C224	1-108-567-00	s	MYLAR 0.0033 5% 50V
C229	1-108-565-00	s	MYLAR 0.0027 5% 50V
C230	1-108-603-00	s	MYLAR 0.1 5% 50V
C231	1-108-585-00	s	MYLAR 0.018 5% 50V
C233	1-107-179-00	s	MICA 270PF 5% 500V
C236	1-108-579-00	s	FILM 0.01 5% 50V
C301	1-130-338-00	s	FILM 0.01 5% 630V
C305	1-108-591-00	s	MYLAR 0.033 5% 50V
C306	1-108-579-00	s	MYLAR 0.01 5% 50V
C307	1-108-579-00	s	MYLAR 0.01 5% 50V
C309	1-108-595-00	s	MYLAR 0.047 5% 50V
C312	1-108-579-00	s	MYLAR 0.01 5% 50V
C314	1-130-336-00	s	FILM 0.0068 5% 630V
C315	1-107-169-00	s	MICA 100PF 5% 500V
C318	1-108-579-00	s	MYLAR 0.01 5% 50V
C320	1-130-336-00	s	FILM 0.0068 5% 630V
C321	1-107-169-00	s	MICA 100PF 5% 500V
C323	1-108-579-00	s	MYLAR 0.01 5% 50V
C324	1-123-819-00	s	ELECT 33 20% 25V
C325	1-130-062-00	s	FILM 0.0056 5% 630V
C327	1-108-579-00	s	MYLAR 0.01 5% 50V
C329	1-130-062-00	s	FILM 0.0056 5% 630V

Ref.No.	Parts No.	SP	Description
C331	1-108-579-00	s	MYLAR 0.01 5% 50V
C333	1-130-062-00	s	FILM 0.0056 5% 630V
C336	1-108-595-00	s	MYLAR 0.047 5% 50V
C337	1-108-595-00	s	MYLAR 0.047 5% 50V
C338	1-108-599-00	s	MYLAR 0.068 5% 50V
C341	1-108-595-00	s	MYLAR 0.047 5% 50V
C342	1-108-595-00	s	MYLAR 0.047 5% 50V
C343	1-108-599-00	s	MYLAR 0.068 5% 50V
C346	1-108-595-00	s	MYLAR 0.047 5% 50V
C347	1-108-595-00	s	MYLAR 0.047 5% 50V
C348	1-108-599-00	s	MYLAR 0.068 5% 50V
C351	1-108-595-00	s	MYLAR 0.047 5% 50V
D101	8-719-911-19	s	1SS119
D102	8-719-911-19	s	1SS119
D103	8-719-911-19	s	1SS119
D104	8-719-168-07	s	RD6.8E-B
D105	8-719-911-19	s	1SS119
D201	8-719-911-19	s	1SS119
D202	8-719-911-19	s	1SS119
D203	8-719-911-19	s	1SS119
D204	8-719-168-07	s	RD6.8E-B
D205	8-719-911-19	s	1SS119
D301	8-719-911-19	s	1SS119
D302	8-719-911-19	s	1SS119
D303	8-719-911-19	s	1SS119
D304	8-719-911-19	s	1SS119
D305	8-719-911-19	s	1SS119
IC101	8-759-705-62	s	NJM4562D-D(JRC)
IC102	8-759-700-04	s	NJM2043D-D(JRC)
IC201	8-759-705-62	s	NJM4562D-D(JRC)
IC202	8-759-700-04	s	NJM2043D-D(JRC)
L301	1-459-155-00	s	45
LV101	1-407-304-00	s	VAR,18mH
LV102	1-407-304-00	s	VAR,18mH
LV103	1-407-297-00	s	VAR,3.5mH
LV104	1-407-304-00	s	VAR,18mH
LV201	1-407-304-00	s	VAR,18mH
LV202	1-407-304-00	s	VAR,18mH
LV203	1-407-297-00	s	VAR,3.5mH
LV204	1-407-304-00	s	VAR,18mH
LV301	1-407-285-00	s	VAR,1.5mH
LV302	1-407-284-00	s	VAR,1mH
LV303	1-407-284-00	s	VAR,1mH
LV304	1-407-284-00	s	VAR,1mH
LV305	1-407-284-00	s	VAR,1mH
LV306	1-407-284-00	s	VAR,1mH
Q101	8-729-173-37	s	2SA733-P
Q102	8-729-663-48	s	2SC1364-8
Q103	8-729-663-48	s	2SC1364-8
Q104	8-729-201-05	s	2SC2878-B
Q105	8-729-240-01	s	2SK240

Ref.No.	Parts No.	SP	Description
Q106	8-729-629-12	s	2SC2291
Q107	8-729-173-37	s	2SA733-P
Q108	8-729-663-48	s	2SC1364-8
Q109	8-769-193-09	s	2SK43-3
Q110	8-729-633-48	s	2SC1364-8
Q111	8-729-201-05	s	2SC2878-B
Q112	8-729-173-37	s	2SA733-P
Q201	8-729-173-37	s	2SA733-P
Q202	8-729-663-48	s	2SC1364-8
Q203	8-729-663-48	s	2SC1364-8
Q204	8-729-201-05	s	2SC2878-B
Q205	8-729-240-01	s	2SK240
Q206	8-729-629-12	s	2SC2291
Q207	8-729-173-37	s	2SA733-P
Q208	8-729-663-48	s	2SC1364-8
Q209	8-769-193-09	s	2SK43-3
Q210	8-729-663-48	s	2SC1364-8
Q211	8-729-201-05	s	2SC2878-B
Q212	8-729-173-37	s	2SA733-P
Q213	8-729-173-37	s	2SA733-P
Q301	8-729-173-37	s	2SA733-P
Q302	8-729-177-43	s	2SD774
Q303	8-729-177-43	s	2SD774
Q304	8-729-177-43	s	2SD774
Q305	8-729-173-37	s	2SA733-P
Q306	8-729-177-43	s	2SD774
Q307	8-729-177-43	s	2SD774
Q308	8-729-173-37	s	2SA733-P
Q309	8-729-173-37	s	2SA733-P
Q310	8-729-177-43	s	2SD774
Q311	8-729-177-43	s	2SD774
Q312	8-729-177-43	s	2SD774
Q313	8-729-173-37	s	2SA733-P
Q314	8-729-177-43	s	2SD774
Q315	8-729-177-43	s	2SD774
Q316	8-729-177-43	s	2SD774
Q317	8-729-173-37	s	2SA733-P
Q318	8-729-177-43	s	2SD774
Q319	8-729-177-43	s	2SD774
Q320	8-729-177-43	s	2SD774
Q321	8-729-173-37	s	2SA733-P
Q322	8-729-177-43	s	2SD774
Q323	8-729-177-43	s	2SD774
Q324	8-729-177-43	s	2SD774
Q325	8-729-173-37	s	2SA733-P
Q326	8-729-177-43	s	2SD774
Q327	8-729-177-43	s	2SD774
Q328	8-729-177-43	s	2SD774
Q329	8-729-173-37	s	2SA733-P
Q330	8-729-201-05	s	2SC2878-B
Q331	8-729-201-05	s	2SC2878-B
Q332	8-729-173-37	s	2SA733-P
Q333	8-729-201-05	s	2SC2878-B
Q334	8-729-201-05	s	2SC2878-B
Q335	8-729-173-37	s	2SA733-P
Q336	8-729-201-05	s	2SC2878-B
Q337	8-729-201-05	s	2SC2878-B

Ref.No.	Parts No.	SP	Description
R118	1-212-706-00	s	METAL 150K 1% 1/2W
R218	1-212-706-00	s	METAL 150K 1% 1/2W
R311	1-244-825-00	s	CARBON 10 5% 1/2W
R329	1-244-825-00	s	CARBON 10 5% 1/2W
R331	1-244-829-00	s	CARBON 15 5% 1/2W
R340	1-244-825-00	s	CARBON 10 5% 1/2W
R342	1-244-829-00	s	CARBON 15 5% 1/2W
R349	1-244-833-00	s	CARBON 22 5% 1/2W
R350	1-244-825-00	s	CARBON 10 5% 1/2W
R357	1-244-833-00	s	CARBON 22 5% 1/2W
R358	1-244-825-00	s	CARBON 10 5% 1/2W
R365	1-244-833-00	s	CARBON 22 5% 1/2W
R366	1-244-825-00	s	CARBON 10 5% 1/2W
RV101	1-228-298-00	s	VAR,CERMET 200K
RV102	1-228-293-00	s	VAR,CERMET 5K
RV103	1-228-308-00	s	VAR,CERMET 10K
RV104	1-228-294-00	s	VAR,CERMET 10K
RV105	1-228-294-00	s	VAR,CERMET 10K
RV106	1-228-296-00	s	VAR,CERMET 50K
RV107	1-228-291-00	s	VAR,CERMET 1K
RV201	1-228-298-00	s	VAR,CERMET 200K
RV202	1-228-293-00	s	VAR,CERMET 5K
RV203	1-228-308-00	s	VAR,CERMET 10K
RV204	1-228-294-00	s	VAR,CERMET 10K
RV205	1-228-294-00	s	VAR,CERMET 10K
RV206	1-228-296-00	s	VAR,CERMET 50K
RV207	1-228-291-00	s	VAR,CERMET 1K
RV301	1-228-302-00	s	VAR,CERMET 100
RV302	1-228-302-00	s	VAR,CERMET 100
S101	1-516-923-21	s	SWITCH
S201	1-516-923-21	s	SWITCH
T301	1-433-195-00	s	BIAS
T302	1-433-196-00	s	BIAS
T303	1-433-196-00	s	BIAS
T304	1-433-196-00	s	BIAS
T305	1-433-196-00	s	BIAS
T306	1-433-196-00	s	BIAS

Ref.No.	Parts No.	SP	Description
BC-5 BOARD			
	A-6717-343-A	o	MOUNTED CIRCUIT BOARD,BC-5
C5	1-102-112-00	s	CERAMIC 330PF 10% 50V
C6	1-102-123-00	s	CERAMIC 0.0033 10% 50V
C7	1-102-109-00	s	CERAMIC 180PF 10% 50V
C8	1-102-109-00	s	CERAMIC 180PF 10% 50V
CN1	1-564-417-11	o	RECEPTACLE,12P
CN2	1-564-416-11	o	RECEPTACLE,10P
CN3	1-564-415-11	o	RECEPTACLE,8P
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
D4	8-719-911-19	s	1SS119
IC1	8-759-240-08	s	TC4008BP(TOSHIBA)
IC2	8-759-200-32	s	TC40H161P(TOSHIBA)
IC3	8-759-145-84	s	uPD4584BC(NEC)
IC4	8-759-240-08	s	TC4008BP(TOSHIBA)
IC5	8-759-200-32	s	TC40H161P(TOSHIBA)
IC6	8-759-200-32	s	TC40H161P(TOSHIBA)
IC7	8-759-220-04	s	TC40H004P(TOSHIBA)
IC8	8-759-220-74	s	TC40H074P(TOSHIBA)
IC9	8-759-200-22	s	TC40H138P(TOSHIBA)
IC10	8-759-200-22	s	TC40H138P(TOSHIBA)
IC11	8-759-200-22	s	TC40H138P(TOSHIBA)
IC12	8-759-200-22	s	TC40H138P(TOSHIBA)
IC13	8-759-240-30	s	TC4030BP(TOSHIBA)
IC14	8-759-240-27	s	TC4027BP(TOSHIBA)
IC15	8-759-974-06	s	SN7406N(TI)
IC16	8-759-200-22	s	TC40H138P(TOSHIBA)
IC17	8-759-240-19	s	TC4019BP(TOSHIBA)
IC18	8-759-240-19	s	TC4019BP(TOSHIBA)
IC19	8-759-240-25	s	TC4025BP(TOSHIBA)
IC20	8-759-240-81	s	TC4081BP(TOSHIBA)
IC21	8-759-240-27	s	TC4027BP(TOSHIBA)
IC22	8-759-240-50	s	TC4050BP(TOSHIBA)
IC23	8-759-200-22	s	TC40H138P(TOSHIBA)
IC24	8-759-240-19	s	TC4019BP(TOSHIBA)
IC25	8-759-240-19	s	TC4019BP(TOSHIBA)
IC26	8-759-240-25	s	TC4025BP(TOSHIBA)
IC27	8-759-240-81	s	TC4081BP(TOSHIBA)
IC28	8-759-240-27	s	TC4027BP(TOSHIBA)
IC29	8-759-974-06	s	SN7406N(TI)
IC30	8-759-240-13	s	TC4013BP(TOSHIBA)
IC31	8-759-240-01	s	TC4001BP(TOSHIBA)
IC32	8-759-240-27	s	TC4027BP(TOSHIBA)
IC33	8-759-240-50	s	TC4050BP(TOSHIBA)
IC34	8-759-240-15	s	TC4015BP(TOSHIBA)
IC35	8-759-240-81	s	TC4081BP(TOSHIBA)
IC36	8-759-240-13	s	TC4013BP(TOSHIBA)
IC37	8-759-240-13	s	TC4013BP(TOSHIBA)
IC38	8-759-145-84	s	uPD4584BC(NEC)

Ref.No.	Parts No.	SP	Description
L1	1-459-155-00	s	45
S1	1-553-563-00	s	ROTARY
S2	1-553-563-00	s	ROTARY
S3	1-553-563-00	s	ROTARY
S4	1-552-509-00	s	DIP
S5	1-552-509-00	s	DIP
X1	1-527-476-00	s	480kHz
BC-6 BOARD			
	A-6717-344-A	o	MOUNTED CIRCUIT BOARD,BC-6
C5	1-102-112-00	s	CERAMIC 330PF 10% 50V
CN2	1-560-471-00	o	RECEPTACLE,10P
	1-561-589-00	o	HOUSING,10P
	1-561-557-00	o	CONTACT
CN3	1-560-471-00	o	RECEPTACLE,10P
	1-561-589-00	o	HOUSING,10P
	1-561-557-00	o	CONTACT
CN4	1-560-471-00	o	RECEPTACLE,10P
	1-561-589-001	o	HOUSING,10P
	1-561-557-00	o	CONTACT
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
IC1	8-759-600-61	s	M54529AP(MITSUBISHI)
IC2	8-759-241-74	s	TC40174BP(TOSHIBA)
IC3	8-759-940-94	s	MSM4094RS(OKI)
IC4	8-759-600-61	s	M54529AP(MITSUBISHI)
IC5	8-759-241-74	s	TC40174BP(TOSHIBA)
IC6	8-759-940-94	s	MSM4094RS(OKI)
IC7	8-759-600-61	s	M54529AP(MITSUBISHI)
IC8	8-759-241-74	s	TC40174BP(TOSHIBA)
IC9	8-759-940-94	s	MSM4094RS(OKI)
IC10	8-759-240-49	s	TC4049BP(TOSHIBA)
IC11	8-759-240-30	s	TC4030BP(TOSHIBA)
IC12	8-759-600-61	s	M54529AP(MITSUBISHI)
IC13	8-759-245-55	s	TC4555BP(TOSHIBA)
IC14	8-759-240-81	s	TC4081BP(TOSHIBA)
IC15	8-759-600-61	s	M54529AP(MITSUBISHI)
IC16	8-759-145-84	s	uPD4584BC(NEC)
IC17	8-759-145-84	s	uPD4584BC(NEC)
L1	1-459-155-00	s	45

Ref.No.	Parts No.	SP	Description
BF-7 BOARD			
	A-6713-189-A	o	MOUNTED CIRCUIT BOARD,BF-7
C3	1-123-616-00	s	ELECT 4.7 20% 25V
C10	1-108-595-00	s	MYLAR 0.047 5% 50V
C103	1-123-616-00	s	ELECT 4.7 20% 25V
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-200-02	s	10E-2
D102	8-719-911-19	s	1SS119
IC1	8-759-745-56	s	NJM4556D(JRC)
IC201	8-759-700-62	s	NJM4562D(JRC)
IC301	8-759-700-62	s	NJM4562D(JRC)
Q1	8-729-663-47	s	2SC1364
Q2	8-729-663-47	s	2SC1364
Q3	8-729-663-47	s	2SC1364
Q4	8-729-201-05	s	2SC2878-B
Q5	8-729-173-37	s	2SA733-P
Q101	8-729-663-47	s	2SC1364
Q102	8-729-663-47	s	2SC1364
Q103	8-729-201-05	s	2SC2878-B
Q104	8-729-173-37	s	2SA733-P
R16	1-244-849-00	s	CARBON 100 5% 1/2W
R17	1-244-849-00	s	CARBON 100 5% 1/2W
⚠ R21	1-207-628-00	s	RES,WIRE 10 10% 3W
R205	1-244-849-00	s	CARBON 100 5% 1/2W
R206	1-244-849-00	s	CARBON 100 5% 1/2W
R305	1-244-849-00	s	CARBON 100 5% 1/2W
R306	1-244-849-00	s	CARBON 100 5% 1/2W
RV1	1-228-306-00	s	VAR,CERMET 2K
RV101	1-228-306-00	s	VAR,CERMET 2K
RV201	1-228-307-00	s	VAR,CERMET 5K
RV202	1-228-307-00	s	VAR,CERMET 5K
RV301	1-228-307-00	s	VAR,CERMET 5K
RV302	1-228-307-00	s	VAR,CERMET 5K

Ref.No.	Parts No.	SP	Description
CC-15 BOARD			
	A-6711-517-A	o	MOUNTED CIRCUIT BOARD,CC-15P
C2	1-123-821-00	s	ELECT 47 20% 16V
C3	1-123-821-00	s	ELECT 47 20% 16V
C9	1-123-821-00	s	ELECT 47 20% 16V
C10	1-109-545-00	s	MICA 270PF 5% 100V
C11	1-124-185-00	s	ELECT 4.7 20% 50V
C12	1-124-119-00	s	ELECT 330 20% 16V
C16	1-161-483-00	s	CERAMIC 0.1 10% 50V
C24	1-123-821-00	s	ELECT 47 20% 16V
C26	1-124-185-00	s	ELECT 4.7 20% 50V
C27	1-124-119-00	s	ELECT 330 20% 16V
C31	1-161-483-00	s	CERAMIC 0.1 10% 50V
C35	1-123-822-00	s	ELECT 47 20% 10V
C37	1-123-821-00	s	ELECT 47 20% 16V
C42	1-123-821-00	s	ELECT 47 20% 16V
C45	1-109-545-00	s	MICA 270PF 5% 100V
C46	1-124-185-00	s	ELECT 4.7 20% 50V
C47	1-124-119-00	s	ELECT 330 20% 16V
C51	1-161-483-00	s	CERAMIC 0.1 10% 50V
C55	1-123-821-00	s	ELECT 47 20% 16V
C57	1-124-185-00	s	ELECT 4.7 20% 50V
C58	1-124-119-00	s	ELECT 330 20% 16V
C62	1-161-483-00	s	CERAMIC 0.1 10% 50V
C101	1-123-822-00	s	ELECT 47 20% 10V
C104	1-123-822-00	s	ELECT 47 20% 10V
C106	1-123-821-00	s	ELECT 47 20% 16V
C112	1-123-821-00	s	ELECT 47 20% 16V
C114	1-124-119-00	s	ELECT 330 20% 16V
C116	1-123-821-00	s	ELECT 47 20% 16V
C122	1-124-472-11	s	ELECT 470 20% 10V
C124	1-107-208-00	s	MICA 18PF 5% 500V
C126	1-123-617-00	s	ELECT 10 20% 16V
C129	1-161-468-00	s	CERAMIC 560PF 5% 50V
C202	1-124-119-00	s	ELECT 330 20% 16V
C203	1-123-821-00	s	ELECT 47 20% 16V
C208	1-124-119-00	s	ELECT 330 20% 16V
C212	1-124-472-11	s	ELECT 470 20% 10V
C214	1-123-822-00	s	ELECT 47 20% 10V
C215	1-123-617-00	s	ELECT 10 20% 16V
C217	1-107-211-00	s	MICA 24PF 5% 500V
C219	1-123-822-00	s	ELECT 47 20% 10V
C221	1-123-821-00	s	ELECT 47 20% 16V
C223	1-123-821-00	s	ELECT 47 20% 16V
C225	1-161-483-00	s	CERAMIC 0.1 10% 50V
C226	1-123-620-00	s	ELECT 10 20% 25V
C227	1-127-456-00	s	ELECT 0.22 20% 25V
C250	1-107-209-00	s	MICA 20PF 5% 500V
C301	1-124-230-11	s	ELECT 47 20% 10V
C302	1-161-481-00	s	CERAMIC 0.047 10% 50V
C303	1-124-230-11	s	ELECT 47 20% 10V
C304	1-161-481-00	s	CERAMIC 0.047 10% 50V
C306	1-161-474-00	s	CERAMIC 0.022 10% 50V
C308	1-161-474-00	s	CERAMIC 0.022 10% 50V
C309	1-161-474-00	s	CERAMIC 0.022 10% 50V
C311	1-161-474-00	s	CERAMIC 0.022 10% 50V
C314	1-161-481-00	s	CERAMIC 0.047 10% 50V
C315	1-124-236-00	s	ELECT 47 20% 16V
C316	1-124-236-00	s	ELECT 47 20% 16V

Ref.No.	Parts No.	SP	Description
C317	1-161-481-00	s	CERAMIC 0.047 10% 50V
C318	1-161-474-00	s	CERAMIC 0.022 10% 50V
C319	1-161-474-00	s	CERAMIC 0.022 10% 50V
C320	1-124-234-00	s	ELECT 22 20% 16V
C321	1-124-234-00	s	ELECT 22 20% 16V
C324	1-161-474-00	s	CERAMIC 0.022 10% 50V
C325	1-161-474-00	s	CERAMIC 0.022 10% 50V
C328	1-161-474-00	s	CERAMIC 0.022 10% 50V
C331	1-124-242-00	s	ELECT 33 20% 25V
C332	1-124-242-00	s	ELECT 33 20% 25V
C333	1-124-236-00	s	ELECT 47 20% 16V
C334	1-161-481-00	s	CERAMIC 0.047 10% 50V
C335	1-124-236-00	s	ELECT 47 20% 16V
C336	1-161-481-00	s	CERAMIC 0.047 10% 50V
C337	1-124-230-11	s	ELECT 47 20% 10V
C338	1-161-481-00	s	CERAMIC 0.047 10% 50V
C340	1-109-549-00	s	MICA 390PF 5% 100V
C341	1-161-474-00	s	CERAMIC 0.022 10% 50V
C342	1-161-474-00	s	CERAMIC 0.022 10% 50V
C343	1-161-481-00	s	CERAMIC 0.047 10% 50V
C344	1-109-545-00	s	MICA 270PF 5% 100V
C345	1-161-481-00	s	CERAMIC 0.047 10% 50V
C347	1-161-481-00	s	CERAMIC 0.047 10% 50V
C349	1-161-481-00	s	CERAMIC 0.047 10% 50V
C351	1-161-481-00	s	CERAMIC 0.047 10% 50V
CN101	1-560-885-00	o	PLUG 20P
CN102	1-560-885-00	o	PLUG 20P
D1	8-719-901-33	s	1SS133
D201	8-719-901-33	s	1SS133
D202	8-719-901-33	s	1SS133
D203	8-719-901-33	s	1SS133
D204	8-719-901-33	s	1SS133
D205	8-719-100-20	s	RD3.9E-B1
D206	8-719-901-33	s	1SS133
D301	8-719-901-33	s	1SS133
D302	8-719-901-33	s	1SS133
D303	8-719-901-33	s	1SS133
D304	8-719-901-33	s	1SS133
D305	8-719-901-33	s	1SS133
D306	8-719-901-33	s	1SS133
D307	8-719-901-33	s	1SS133
FB1	1-535-178-00	s	
FB2	1-535-178-00	s	
FB3	1-535-178-00	s	
FB4	1-535-178-00	s	
FB5	1-535-178-00	s	
FB6	1-535-178-00	s	
FB7	1-535-178-00	s	
FB8	1-535-178-00	s	
FL1	1-235-321-11	s	LPF
FL2	1-235-321-11	s	LPF
FL101	1-235-322-11	s	LPF

Ref.No.	Parts No.	SP	Description
IC1	8-759-906-07	s	TL607CP(TI)
IC2	8-752-006-10	s	CX20061(SONY)
IC3	8-759-201-40	s	TL8605P-S(TOSHIBA)
IC4	8-759-178-08	s	uPC78L08(NEC)
IC5	8-759-201-40	s	TL8605P-S(TOSHIBA)
IC6	8-759-906-07	s	TL607CP(TI)
IC7	8-752-006-10	s	CX20061(SONY)
IC8	8-759-201-40	s	TL8605P-S(TOSHIBA)
IC9	8-759-201-40	s	TL8605P-S(TOSHIBA)
IC101	8-759-240-51	s	TC4051BP(TOSHIBA)
IC102	8-729-203-21	s	2SK389-GR
IC103	8-752-006-10	s	CX20061(SONY)
IC104	8-749-938-90	s	BX389(SONY)
IC201	8-752-006-10	s	CX20061(SONY)
IC202	8-749-938-90	s	BX389(SONY)
IC203	8-759-904-26	s	SN74ALS08N(TI)
IC204	8-759-990-82	s	TL082CP(TI)
IC301	8-759-902-21	s	SN74LS221N(TI)
IC302	8-759-301-24	s	HD10124(HITACHI)
IC303	8-759-001-98	s	MC10198L(MOTOROLA)
IC304	8-759-001-98	s	MC10198L(MOTOROLA)
IC305	8-759-300-25	s	HD10125(HITACHI)
IC306	8-759-904-18	s	SN74ALS00AN(TI)
IC307	8-749-938-10	s	BX381(SONY)
IC308	8-759-900-59	s	HI1-201-5(HARRIS)
IC309	8-759-145-57	s	uPC4557C(NEC)
IC310	8-759-354-52	s	HD75452P(HITACHI)
IC311	8-759-131-11	s	uPC311C(NEC)
L308	1-459-155-00	s	45
LV101	1-407-575-00	s	VAR,100
LV201	1-407-574-00	s	VAR,68
Q1	8-724-375-01	s	2SC403C
Q2	8-729-603-50	s	2SC403SP
Q3	8-724-375-01	s	2SC403C
Q4	8-729-173-37	s	2SA733-P
Q5	8-724-375-01	s	2SC403C
Q6	8-724-375-01	s	2SC403C
Q7	8-729-173-37	s	2SA733-P
Q8	8-724-375-01	s	2SC403C
Q9	8-724-375-01	s	2SC403C
Q10	8-729-603-50	s	2SC403SP
Q11	8-724-375-01	s	2SC403C
Q12	8-729-173-37	s	2SA733-P
Q13	8-724-375-01	s	2SC403C
Q14	8-724-375-01	s	2SC403C
Q15	8-729-173-37	s	2SA733-P
Q16	8-724-375-01	s	2SC403C
Q101	8-729-112-06	s	2SA1206
Q102	8-769-193-09	s	2SK43-3
Q103	8-724-375-01	s	2SC403C
Q104	8-729-173-37	s	2SA733-P
Q105	8-724-375-01	s	2SC403C
Q106	8-724-375-01	s	2SC403C
Q107	8-729-190-12	s	2SC2901
Q201	8-724-375-01	s	2SC403C
Q202	8-729-190-12	s	2SC2901

Ref.No.	Parts No.	SP	Description
Q203	8-729-190-12	s	2SC2901
Q204	8-724-375-01	s	2SC403C
Q205	8-729-190-12	s	2SC2901
Q206	8-729-190-12	s	2SC2901
Q207	8-729-112-06	s	2SA1206
Q208	8-729-112-06	s	2SA1206
Q209	8-729-112-06	s	2SA1206
Q210	8-729-112-06	s	2SA1206
Q301	8-729-190-12	s	2SC2901
R128	1-214-585-00	s	RES,METAL 15K
R244	1-214-575-00	s	RES,METAL 5.6K
RV2	1-228-290-00	s	VAR,CERMET 500
RV3	1-228-294-00	s	VAR,CERMET 10K
RV4	1-228-290-00	s	VAR,CERMET 500
RV5	1-228-294-00	s	VAR,CERMET 10K
RV7	1-228-290-00	s	VAR,CERMET 500
RV8	1-228-294-00	s	VAR,CERMET 10K
RV9	1-228-290-00	s	VAR,CERMET 500
RV10	1-228-294-00	s	VAR,CERMET 10K
RV101	1-228-290-00	s	VAR,CERMET 500
RV102	1-228-292-00	s	VAR,CERMET 2K
RV103	1-228-293-00	s	VAR,CERMET 5K
RV202	1-228-293-00	s	VAR,CERMET 5K
RV301	1-228-293-00	s	VAR,CERMET 5K
RV302	1-228-293-00	s	VAR,CERMET 5K
TH1	1-800-071-XX	s	S-300
TH2	1-800-071-XX	s	S-300
TH201	1-806-702-00	s	POSITIVE 2700

Ref.No.	Parts No.	SP	Descripion
CK-14 BOARD			
P:	A-6711-526-B	o	MOUNTED CIRCUIT BOARD,CK-14P
S:	A-6711-571-B	o	MOUNTED CIRCUIT BOARD,CK-14S
	CK-14 BOARD		
C10	1-102-114-00	s	CERAMIC 470PF 10% 50V
C18	1-109-535-00	s	MICA 100PF 5% 100V
C23	1-109-537-00	s	MICA 120PF 5% 100V
C25	1-102-106-00	s	CERAMIC 100PF 10% 50V
C26	1-102-114-00	s	CERAMIC 470PF 10% 50V
C33	1-109-526-00	s	MICA 43PF 5% 100V
C36	1-109-539-00	s	MICA 150PF 5% 100V
C55	1-109-526-00	s	MICA 43PF 5% 100V
C81	1-102-106-00	s	CERAMIC 100PF 10% 50V
C89	1-109-545-00	s	MICA 270PF 5% 100V
C90	1-130-853-00	s	FILM 0.0047 5% 100V
C112	1-102-114-00	s	CERAMIC 470PF 10% 50V
C123	1-109-549-00	s	MICA 390PF 5% 100V
C125	1-109-528-00	s	MICA 51PF 5% 100V
C126	1-109-531-00	s	MICA 68PF 5% 100V
C128	1-102-106-00	s	CERAMIC 100PF 10% 50V
C129	1-102-114-00	s	CERAMIC 470PF 10% 50V
C141	1-109-525-00	s	MICA 39PF 5% 100V
C146	1-109-539-00	s	MICA 150PF 5% 100V
C163	1-109-525-00	s	MICA 39PF 5% 100V
C179	1-130-853-00	s	FILM 0.0047 5% 100V
C203	1-109-545-00	s	MICA 270PF 5% 100V
C221	1-107-204-00	s	MICA 12PF 5% 500V
C234	1-107-157-00	s	MICA 27PF 5% 500V
C277	1-109-539-00	s	MICA 150PF 5% 100V
C279	1-109-539-00	s	MICA 150PF 5% 100V
C286	1-109-562-00	s	MICA 0.0011 5% 100V
C301	1-109-553-00	s	MICA 470PF 5% 100V
C701	1-102-106-00	s	CERAMIC 100PF 10% 50V
CF1	1-527-497-00	s	CERAMIC 4.55MHz
D1	8-719-901-33	s	1SS133
D2	8-719-901-33	s	1SS133
D3	8-719-901-33	s	1SS133
D4	8-719-901-33	s	1SS133
D5	8-719-901-33	s	1SS133
D7	8-719-901-33	s	1SS133
D8	8-719-901-33	s	1SS133
D9	8-719-901-33	s	1SS133
D10	8-719-901-33	s	1SS133
D11	8-719-901-33	s	1SS133
D12	8-719-901-33	s	1SS133
D13	8-719-901-33	s	1SS133
D14	8-719-901-33	s	1SS133
D15	8-719-901-33	s	1SS133
D16	8-719-901-33	s	1SS133
D17	8-719-901-33	s	1SS133
D19	8-719-901-33	s	1SS133
D20	8-719-901-33	s	1SS133
D21	8-719-901-33	s	1SS133
D22	8-719-901-33	s	1SS133
D23	8-719-101-97	s	1SS97-1
D24	8-719-815-80	s	1S1587
D25	8-719-901-33	s	1SS133
D26	8-719-901-33	s	1SS133
D27	8-719-901-33	s	1SS133

Ref.No.	Parts No.	SP	Description
D28	8-719-162-07	s	RD6.2E-B
D29	8-719-901-33	s	1SS133
D30	8-719-162-07	s	RD6.2E-B
D33	8-719-901-33	s	1SS133
D41	8-719-901-33	s	1SS133
D42	8-719-901-33	s	1SS133
D43	8-719-901-33	s	1SS133
D44	8-719-901-33	s	1SS133
D50	8-719-815-80	s	1S1587
IC1	8-759-900-74	s	SN74LS74AN(TI)
IC2	8-759-901-91	s	SN74LS191N(TI)
IC3	8-759-901-23	s	SN74LS123N(TI)
ICB1	8-759-902-74	s	SN74LS423N(TI)
ICC1	8-759-900-74	s	SN74LS74AN(TI)
ICD1	8-759-900-00	s	SN74LS00N(TI)
ICE1	8-759-900-11	s	SN74LS11N(TI)
ICF1	8-759-900-58	s	HA1-4905-5(HARRIS)
ICJ1	8-759-974-06	s	SN7406N(TI)
ICK1	8-759-103-19	s	uPC319C(NEC)
ICL1	8-759-900-74	s	SN74LS74AN(TI)
ICM1	8-759-900-00	s	SN74LS00N(TI)
ICN1	8-759-900-11	s	SN74LS11N(TI)
ICP1	8-759-900-58	s	HA1-4905-5(HARRIS)
ICT1	8-757-731-00	s	CX773A(SONY)
ICU1	8-759-300-25	s	HD10125(HITACHI)
ICV1	8-759-900-00	s	SN74LS00N(TI)
ICX1	8-757-903-00	s	CX7903(SONY)
ICY1	8-759-103-19	s	uPC319C(NEC)
ICZ1	8-759-952-07	s	SN75207BN(TI)
ICA2	8-759-301-24	s	HD10124(HITACHI)
ICB2	8-759-902-21	s	SN74LS221N(TI)
ICC2	8-759-901-63	s	SN74LS163AN(TI)
ICD2	8-759-902-21	s	SN74LS221N(TI)
ICE2	8-759-901-12	s	SN74LS112AN(TI)
ICG2	8-759-990-82	s	TL082CP(TI)
ICH2	8-759-990-84	s	TL084CN(TI)
ICI2	8-759-902-21	s	SN74LS221N(TI)
ICJ2	8-759-301-24	s	HD10124(HITACHI)
ICK2	8-759-902-21	s	SN74LS221N(TI)
ICL2	8-759-901-63	s	SN74LS163AN(TI)
ICM2	8-759-902-21	s	SN74LS221N(TI)
ICN2	8-759-901-12	s	SN74LS112AN(TI)
ICR2	8-759-990-82	s	TL082CP(TI)
ICS2	8-759-990-84	s	TL084CN(TI)
ICT2	8-759-943-65	s	SN74365AN(TI)
ICU2	8-759-974-04	s	SN7404N(TI)
ICV2	8-759-952-07	s	SN75207BN(TI)
ICW2	8-759-974-06	s	SN7406N(TI)
ICZ2	8-759-902-21	s	SN74LS221N(TI)
ICA3	8-759-001-98	s	MC10198L(MOTOROLA)
ICB3	8-759-901-63	s	SN74LS163AN(TI)
ICC3	8-759-914-00	s	SN7400N(TI)
ICD3	8-759-901-64	s	SN74LS164N(TI)
ICE3	8-759-900-08	s	SN74LS08N(TI)
ICF3	8-759-900-59	s	HI1-201-5(HARRIS)
ICG3	8-749-938-10	s	BX381(SONY)
ICH3	8-759-908-86	s	HI1-201H-5(HARRIS)
ICI3	8-759-900-00	s	SN74LS00N(TI)
ICJ3	8-759-001-98	s	MC10198L(MOTOROLA)
ICK3	8-759-901-63	s	SN74LS163AN(TI)
ICL3	8-759-914-00	s	SN7400N(TI)
ICM3	8-759-901-64	s	SN74LS164N(TI)
ICN3	8-759-900-08	s	SN74LS08N(TI)
ICP3	8-759-900-59	s	HI1-201-5(HARRIS)

Ref.No.	Parts No.	SP	Description
ICR3	8-749-938-10	s	BX381(SONY)
ICS3	8-759-908-86	s	HI1-201H-5(HARRIS)
ICT3	8-759-901-64	s	SN74LS164N(TI)
ICU3	8-759-901-64	s	SN74LS164N(TI)
ICV3	8-759-902-21	s	SN74LS221N(TI)
ICW3	8-759-942-65	s	SN74265N(TI)
ICX3	8-749-938-10	s	BX381(SONY)
ICZ3	8-759-900-74	s	SN74LS74AN(TI)
ICA4	8-759-001-98	s	MC10198L(MOTOROLA)
ICB4	8-759-911-63	s	SN74S163N(TI)
ICC4	8-759-900-74	s	SN74LS74AN(TI)
ICD4	8-759-901-23	s	SN74LS123N(TI)
ICE4	8-759-900-04	s	SN74LS04N(TI)
ICF4	8-759-145-57	s	uPC4557C(NEC)
ICG4	8-759-745-60	s	NJM4560D(JRC)
ICH4	8-759-952-07	s	SN75207BN(TI)
ICI4	8-759-240-53	s	TC4053BP(TOSHIBA)
ICJ4	8-759-001-98	s	MC10198L(MOTOROLA)
ICK4	8-759-911-63	s	SN74S163N(TI)
ICL4	8-759-900-74	s	SN74LS74AN(TI)
ICM4	8-759-901-23	s	SN74LS123N(TI)
ICN4	8-759-900-04	s	SN74LS04N(TI)
ICP4	8-759-145-57	s	uPC4557C(NEC)
ICR4	8-759-745-60	s	NJM4560D(JRC)
ICS4	8-759-952-07	s	SN75207BN(TI)
ICT4	8-759-901-64	s	SN74LS164N(TI)
ICU4	8-759-900-00	s	SN74LS00N(TI)
ICV4	8-759-974-04	s	SN7404N(TI)
ICW4	8-759-901-63	s	SN74LS163AN(TI)
ICA5	8-759-300-25	s	HD10125(HITACHI)
ICB5	8-759-941-91	s	SN74191N(TI)
ICC5	8-759-901-74	s	SN74LS174N(TI)
ICD5	8-759-910-51	s	SN74S51N(TI)
ICE5	8-759-902-21	s	SN74LS221N(TI)
ICF5	8-759-902-21	s	SN74LS221N(TI)
ICG5	8-759-954-52	s	SN75452BP(TI)
ICH5	8-759-103-19	s	uPC319C(NEC)
ICI5	8-759-045-57	s	MC14557BCP(MOTOROLA)
ICJ5	8-759-300-25	s	HD10125(HITACHI)
ICK5	8-759-941-91	s	SN74191N(TI)
ICL5	8-759-901-74	s	SN74LS174N(TI)
ICM5	8-759-910-51	s	SN74S51N(TI)
ICN5	8-759-902-21	s	SN74LS221N(TI)
ICP5	8-759-902-21	s	SN74LS221N(TI)
ICR5	8-759-954-52	s	SN75452BP(TI)
ICS5	8-759-103-19	s	uPC319C(NEC)
ICT5	8-759-901-64	s	SN74LS164N(TI)
ICU5	8-759-910-51	s	SN74S51N(TI)
ICV5	8-759-902-21	s	SN74LS221N(TI)
ICW5	8-759-901-63	s	SN74LS163AN(TI)
ICX5	8-759-911-63	s	SN74S163N(TI)
ICZ5	8-759-902-21	s	SN74LS221N(TI)
ICG01	8-759-906-01	s	TL601CP(TI)
ICG02	8-759-906-01	s	TL601CP(TI)
ICH01	8-759-906-01	s	TL601CP(TI)
ICH02	8-759-906-01	s	TL601CP(TI)
ICR01	8-759-906-01	s	TL601CP(TI)
ICR02	8-759-906-01	s	TL601CP(TI)
ICS01	8-759-906-01	s	TL601CP(TI)
ICS02	8-759-906-01	s	TL601CP(TI)

Ref.No.	Parts No.	SP	Description
JP1	1-560-733-00	s	PIN,SHORT
JP2	1-560-733-00	s	PIN,SHORT
JP3	1-560-733-00	s	PIN,SHORT
JP4	1-560-733-00	s	PIN,SHORT
JP5	1-560-733-00	s	PIN,SHORT
JP6	1-560-733-00	s	PIN,SHORT
JP7	1-560-733-00	s	PIN,SHORT
JP8	1-560-733-00	s	PIN,SHORT
JP9	1-560-733-00	s	PIN,SHORT
JP10	1-560-733-00	s	PIN,SHORT
JP21	1-560-733-00	s	PIN,SHORT
JP22	1-560-733-00	s	PIN,SHORT
JP23	1-560-733-00	s	PIN,SHORT
JP24	1-560-733-00	s	PIN,SHORT
JP25	1-560-733-00	s	PIN,SHORT
JP26	1-560-733-00	s	PIN,SHORT
JP27	1-560-733-00	s	PIN,SHORT
JP28	1-560-733-00	s	PIN,SHORT
JP29	1-560-733-00	s	PIN,SHORT
JP30	1-560-733-00	s	PIN,SHORT
JP31	1-560-733-00	s	PIN,SHORT
JP32	1-560-733-00	s	PIN,SHORT
JS1	1-561-832-00	s	SOCKET,SHORT
JS2	1-561-832-00	s	SOCKET,SHORT
JS3	1-561-832-00	s	SOCKET,SHORT
JS4	1-561-832-00	s	SOCKET,SHORT
JS5	1-561-832-00	s	SOCKET,SHORT
L3	1-421-329-00	s	10
L4	1-421-329-00	s	10
L5	1-421-329-00	s	10
L6	1-421-329-00	s	10
L13	1-421-329-00	s	10
L14	1-421-329-00	s	10
L16	1-407-932-00	s	MICRO 10
L24	1-407-923-00	s	MICRO 47
L27	1-421-329-00	s	10
L28	1-421-329-00	s	10
Q1	8-729-117-54	s	2SA1175
Q2	8-729-117-54	s	2SA1175
Q3	8-769-195-00	s	2SK43-5
Q4	8-729-117-54	s	2SA1175
Q5	8-729-672-43	s	2SC2724
Q6	8-729-117-54	s	2SA1175
Q7	8-729-603-50	s	2SC403C
Q8	8-729-603-50	s	2SC403C
Q9	8-729-603-50	s	2SC403C
RB1	1-231-521-00	s	3.3Kx4
RB2	1-231-521-00	s	3.3Kx4
RB3	1-231-505-11	s	680x4
RB4	1-231-533-00	s	10Kx4
RB6	1-231-521-00	s	3.3kx4

Ref.No.	Parts No.	SP	Description
RV1	1-230-842-11	s	VAR,CERMET 5K
RV2	1-230-843-11	s	VAR,CERMET 10K
RV3	1-230-841-11	s	VAR,CERMET 2K
RV5	1-230-840-11	s	VAR,CERMET 1K
RV6	1-230-843-11	s	VAR,CERMET 10K
RV7	1-230-842-11	s	VAR,CERMET 5K
RV8	1-230-842-11	s	VAR,CERMET 5K
RV9	1-230-841-11	s	VAR,CERMET 2K
RV10	1-230-840-11	s	VAR,CERMET 1K
RV11	1-230-840-11	s	VAR,CERMET 1K
RV12	1-230-843-11	s	VAR,CERMET 10K
RV13	1-230-842-11	s	VAR,CERMET 5K
RV14	1-230-842-11	s	VAR,CERMET 5K
RV20	1-230-843-11	s	VAR,METAL 10K
S1	1-553-925-00	s	ROTARY
S2	1-553-925-00	s	ROTARY
S3	1-552-509-00	s	DIP
X1W	1-527-729-00	s	VCO,14.1875MHz
X4X	1-567-088-00	s	VCO,11.25MHz

CK-17 BOARD

UP TO S/N 11040(P)
UP TO S/N 10029(S)

C1	1-102-115-00	s	CERAMIC 560PF	10%	50V
C2	1-102-115-00	s	CERAMIC 560PF	10%	50V
C3	1-123-822-00	s	ELECT 47	20%	10V
C4	1-161-013-00	s	CERAMIC 0.01	10%	25V
C5	1-161-013-00	s	CERAMIC 0.01	10%	25V
C6	1-161-013-00	s	CERAMIC 0.01	10%	25V

IC1	8-759-902-21	s	SN74LS221N(TI)
IC2	8-759-900-00	s	SN74LS00N(TI)
IC3	8-759-240-53	s	TC4053BP(TOSHIBA)
IC4	8-759-900-00	s	SN74LS00N(TI)
IC5	8-759-345-57	s	HD14557BP(HITACHI)
S1	1-552-509-00	s	DIP

Ref.No.	Parts No.	SP	Description
CK-15 BOARD			
	UP TO S/N 10710		
	A-6711-516-A	o	MOUNTED CIRCUIT BOARD,CK-15
C501	1-161-481-00	s	CERAMIC 0.047 10% 50V
C502	1-124-224-00	s	ELECT 47 20% 6.3V
C503	1-124-225-00	s	ELECT 100 20% 6.3V
C504	1-161-481-00	s	CERAMIC 0.047 10% 50V
C505	1-161-465-00	s	CERAMIC 330PF 5% 50V
C506	1-107-206-00	s	MICA 15PF 5% 500V
C507	1-161-474-00	s	CERAMIC 0.022 10% 50V
C511	1-161-461-00	s	CERAMIC 150PF 5% 50V
C512	1-161-474-00	s	CERAMIC 0.022 10% 50V
C514	1-161-474-00	s	CERAMIC 0.022 10% 50V
C515	1-161-474-00	s	CERAMIC 0.022 10% 50V
C516	1-161-460-00	s	CERAMIC 120PF 5% 50V
C517	1-161-474-00	s	CERAMIC 0.022 10% 50V
C701	1-124-224-00	s	ELECT 47 20% 6.3V
C702	1-161-481-00	s	CERAMIC 0.047 10% 50V
C703	1-107-210-00	s	MICA 22PF 5% 500V
C704	1-107-210-00	s	MICA 22PF 5% 500V
C705	1-124-224-00	s	ELECT 47 20% 6.3V
C706	1-161-481-00	s	CERAMIC 0.047 10% 50V
C707	1-124-224-00	s	ELECT 47 20% 6.3V
C708	1-161-481-00	s	CERAMIC 0.047 10% 50V
CN101	1-560-940-00	o	RECEPTACLE,20P
CN102	1-560-940-00	o	RECEPTACLE,20P
FB701	1-535-178-00	s	
FB702	1-535-178-00	s	
IC501	8-759-902-21	s	SN74LS221N(TI)
IC502	8-759-902-21	s	SN74LS221N(TI)
IC503	8-759-902-21	s	SN74LS221N(TI)
IC504	8-759-902-21	s	SN74LS221N(TI)
IC505	8-759-900-74	s	SN74LS74AN(TI)
IC701	8-759-908-78	s	CX7994(SONY)
IC702	8-759-908-74	s	CX7992(SONY)
RV501	1-226-703-00	s	VAR,METAL 10K
RV502	1-226-703-00	s	VAR,METAL 10K
RV503	1-226-773-00	s	VAR,METAL 22K
RV504	1-226-703-00	s	VAR,METAL 10K
RV505	1-226-703-00	s	VAR,METAL 10K
RV506	1-226-703-00	s	VAR,METAL 10K
X701	1-567-147-11	s	VCO,10.664135MHz
CK-16 BOARD			
	A-6711-738-A	o	MOUNTED CIRCUIT BOARD,CK-16(UC,J) S/N 11719 AND LATER(UC) S/N 10806 AND LATER(J)
	A-6711-587-A	o	MOUNTED CIRCUIT BOARD,CK-16PS(P,S) S/N 10711 AND LATER(P) S/N 10001 AND LATER(S)
C501	1-161-481-00	s	CERAMIC 0.047 10% 50V
C502	1-124-224-00	s	ELECT 47 20% 6.3V
C503	1-124-225-00	s	ELECT 100 20% 6.3V
C504	1-161-481-00	s	CERAMIC 0.047 10% 50V
C505	1-161-463-00	s	CERAMIC 220PF 5% 50V

Ref No.	Parts No.	SP	Description
C506	1-107-206-00	s	MICA 15PF 5% 500V
C507	1-161-474-00	s	CERAMIC 0.022 10% 50V
C508	1-161-476-00	s	CERAMIC 51PF 5% 50V
C509	1-161-476-00	s	CERAMIC 51PF 5% 50V
C511	1-161-461-00	s	CERAMIC 150PF 5% 50V
C512	1-161-474-00	s	CERAMIC 0.022 10% 50V
C513	1-161-477-00	s	CERAMIC 56PF 5% 50V
C514	1-161-474-00	s	CERAMIC 0.022 10% 50V
C515	1-161-474-00	s	CERAMIC 0.022 10% 50V
C516	1-161-460-00	s	CERAMIC 120PF 5% 50V
C517	1-161-474-00	s	CERAMIC 0.022 10% 50V
C701	1-124-224-00	s	ELECT 47 20% 6.3V
C702	1-161-481-00	s	CERAMIC 0.047 10% 50V
C703	1-107-210-00	s	MICA 22PF 5% 500V
C704	1-107-210-00	s	MICA 22PF 5% 500V
C705	1-124-224-00	s	ELECT 47 20% 6.3V
C706	1-161-481-00	s	CERAMIC 0.047 10% 50V
C707	1-124-224-00	s	ELECT 47 20% 6.3V
C708	1-161-481-00	s	CERAMIC 0.047 10% 50V
C709	1-161-474-00	s	CERAMIC 0.022 10% 50V
C710	1-124-224-00	s	ELECT 47 20% 6.3V
C711	1-161-474-00	s	CERAMIC 0.022 10% 50V
C712	1-161-462-00	s	CERAMIC 180PF 5% 50V
C713	1-161-462-00	s	CERAMIC 180PF 5% 50V
C714	1-161-463-00	s	CERAMIC 220PF 5% 50V
CN101	1-560-940-00	o	RECEPTACLE,20P
CN102	1-560-940-00	o	RECEPTACLE,20P
FB701	1-535-178-00	s	RES,FERRITE
FB702	1-535-178-00	s	RES,FERRITE
IC501	8-759-902-21	s	SN74LS221N(TI)
IC502	8-759-902-21	s	SN74LS221N(TI)
IC503	8-759-902-21	s	SN74LS221N(TI)
IC504	8-759-902-21	s	SN74LS221N(TI)
IC505	8-759-900-74	s	SN74LS74AN(TI)
IC701	8-759-908-78	s	CX7994(SONY)
IC702	8-759-908-74	s	CX7992(SONY)
IC703	8-759-902-21	s	SN74LS221N(TI)
IC704	8-759-902-21	s	SN74LS221N(TI)
R501	1-215-425-00	s	METAL 1.5K 1% 1/6W
R502	1-215-429-00	s	METAL 2.2K 1% 1/6W
R503	1-215-451-00	s	METAL 18K 1% 1/6W
R504	1-215-463-00	s	METAL 56K 1% 1/6W
R505	1-215-456-00	s	METAL 30K 1% 1/6W
R506	1-215-454-00	s	METAL 24K 1% 1/6W
R507	1-215-459-00	s	METAL 39K 1% 1/6W
R508	1-215-449-00	s	METAL 15K 1% 1/6W
R509	1-215-433-00	s	METAL 3.3K 1% 1/6W
R707	1-215-435-00	s	METAL 3.9K 1% 1/6W
R708	1-215-443-00	s	METAL 8.2K 1% 1/6W
R709	1-215-449-00	s	METAL 15K 1% 1/6W
RV501	1-226-703-00	s	VAR,METAL 10K
RV502	1-226-703-00	s	VAR,METAL 10K
RV503	1-226-773-00	s	VAR,METAL 22K
RV504	1-226-703-00	s	VAR,METAL 10K
RV505	1-226-703-00	s	VAR,METAL 10K
RV506	1-226-703-00	s	VAR,METAL 10K
RV701	1-226-703-00	s	VAR,METAL 10K
RV702	1-226-703-00	s	VAR,METAL 10K
RV703	1-226-703-00	s	VAR,METAL 10K
X701	1-567-148-00	s	VCO,10.738635MHz(UC,J)
X701	1-567-147-11	s	VCO,10.664135MHz(P,S)

Ref.No.	Parts No.	SP	Description
CL-7 BOARD			
	1-608-052-00	o	PRINTED CIRCUIT BOARD,CL-7
CP-61 BOARD			
	A-6713-190-A	o	MOUNTED CIRCUIT BOARD,CP-61
C1	1-108-555-00	s	MYLAR 0.001 5% 50V
C2	1-107-169-00	s	MICA 100PF 5% 500V
C3	1-107-210-00	s	MICA 22PF 5% 500V
C5	1-123-830-00	s	ELECT 4.7 20% 50V
C6	1-108-595-00	s	MYLAR 0.047 5% 50V
C7	1-108-595-00	s	MYLAR 0.047 5% 50V
C8	1-107-169-00	s	MICA 100PF 5% 500V
C9	1-107-169-00	s	MICA 100PF 5% 500V
C10	1-108-595-00	s	MYLAR 0.047 5% 50V
C11	1-108-595-00	s	MYLAR 0.047 5% 50V
C16	1-123-324-00	s	ELECT 1000 20% 16V
C17	1-123-324-00	s	ELECT 1000 20% 16V
C101	1-108-555-00	s	MYLAR 0.001 5% 50V
C102	1-107-169-00	s	MICA 100PF 5% 500V
C103	1-107-210-00	s	MICA 22PF 5% 500V
C105	1-123-830-00	s	ELECT 4.7 20% 50V
C201	1-102-108-00	s	CERAMIC 150PF 10% 50V
C202	1-107-210-00	s	MICA 22PF 5% 500V
C205	1-108-595-00	s	MYLAR 0.047 5% 50V
C206	1-108-595-00	s	MYLAR 0.047 5% 50V
C209	1-107-169-00	s	MICA 100PF 5% 500V
C210	1-107-169-00	s	MICA 100PF 5% 500V
C213	1-108-595-00	s	MYLAR 0.047 5% 50V
C214	1-108-595-00	s	MYLAR 0.047 5% 50V
C301	1-102-108-00	s	CERAMIC 150PF 10% 50V
C302	1-107-210-00	s	MICA 22PF 5% 500V
C305	1-108-595-00	s	MYLAR 0.047 5% 50V
C306	1-108-595-00	s	MYLAR 0.047 5% 50V
C309	1-107-169-00	s	MICA 100PF 5% 500V
C310	1-107-169-00	s	MICA 100PF 5% 500V
C313	1-108-595-00	s	MYLAR 0.047 5% 50V
C314	1-108-595-00	s	MYLAR 0.047 5% 50V
C401	1-102-108-00	s	CERAMIC 150PF 10% 50V
C402	1-107-210-00	s	MICA 22PF 5% 500V
C405	1-108-595-00	s	MYLAR 0.047 5% 50V
C406	1-108-595-00	s	MYLAR 0.047 5% 50V
C409	1-107-169-00	s	MICA 100PF 5% 500V
C410	1-107-169-00	s	MICA 100PF 5% 500V
C413	1-108-595-00	s	MYLAR 0.047 5% 50V
C414	1-108-595-00	s	MYLAR 0.047 5% 50V
D1	8-719-200-46	s	10YD4.5A
D101	8-719-200-46	s	10YD4.5A
D201	8-719-911-19	s	1SS119
D202	8-719-911-19	s	1SS119
D203	8-719-200-02	s	10E-2
D204	8-719-200-02	s	10E-2
D301	8-719-911-19	s	1SS119
D302	8-719-911-19	s	1SS119
D401	8-719-911-19	s	1SS119
D402	8-719-911-19	s	1SS119
IC1	8-759-700-04	s	NJM2043D-D(JRC)
IC201	8-759-745-61	s	NJM4560D-D(JRC)
IC301	8-759-745-61	s	NJM4560D-D(JRC)
IC401	8-759-745-61	s	NJM4560D-D(JRC)

Ref.No.	Parts No.	SP	Description
Q1	8-729-240-01	s	2SK240
Q2	8-729-378-84	s	2SD788
Q3	8-729-373-92	s	2SB739
Q101	8-729-240-01	s	2SK240
Q201	8-729-306-92	s	2SD669A
Q202	8-729-304-92	s	2SB649A
Q203	8-729-201-05	s	2SC2878-B
Q204	8-729-173-37	s	2SA733-P
Q205	8-729-378-84	s	2SD788
Q206	8-729-373-92	s	2SB739
Q301	8-729-306-92	s	2SD669A
Q302	8-729-304-92	s	2SB649A
Q303	8-729-201-05	s	2SC2878-B
Q304	8-729-173-37	s	2SA733-P
Q305	8-729-378-84	s	2SD788
Q306	8-729-373-92	s	2SB739
Q401	8-729-306-92	s	2SD669A
Q402	8-729-304-92	s	2SB649A
Q403	8-729-201-05	s	2SC2878-B
Q404	8-729-173-37	s	2SA733-P
Q405	8-729-378-84	s	2SD788
Q406	8-729-373-92	s	2SB739
Q407	8-729-201-05	s	2SC2878-B
Q408	8-729-173-37	s	2SA733-P
R13	1-247-192-00	s	CARBON 10 5% 1/2W
R14	1-247-192-00	s	CARBON 10 5% 1/2W
R208	1-247-192-00	s	CARBON 10 5% 1/2W
R209	1-247-192-00	s	CARBON 10 5% 1/2W
R210	1-247-185-00	s	CARBON 2.7 5% 1/2W
R212	1-247-228-00	s	CARBON 330 5% 1/2W
R213	1-247-228-00	s	CARBON 330 5% 1/2W
R308	1-247-192-00	s	CARBON 10 5% 1/2W
R309	1-247-192-00	s	CARBON 10 5% 1/2W
R310	1-247-185-00	s	CARBON 2.7 5% 1/2W
R312	1-247-228-00	s	CARBON 330 5% 1/2W
R313	1-247-228-00	s	CARBON 330 5% 1/2W
R408	1-247-192-00	s	CARBON 10 5% 1/2W
R409	1-247-192-00	s	CARBON 10 5% 1/2W
R410	1-247-185-00	s	CARBON 2.7 5% 1/2W
R412	1-247-228-00	s	CARBON 330 5% 1/2W
R413	1-247-228-00	s	CARBON 330 5% 1/2W
RV201	1-224-251-XX	s	VAR,METAL 4.7K
RV301	1-224-251-XX	s	VAR,METAL 4.7K
RV401	1-224-251-XX	s	VAR,METAL 4.7K
T1	1-423-226-00	s	INPUT/OUTPUT
T101	1-423-226-00	s	INPUT/OUTPUT
T201	1-423-225-00	s	OUTPUT
T301	1-423-225-00	s	OUTPUT
T401	1-423-225-00	s	OUTPUT
CP-62 BOARD			
	A-6715-213-A	o	MOUNTED CIRCUIT BOARD,CP-62
SW1	1-516-576-00	s	SLIDE "75ohm ON/OFF"
SW2	1-516-576-00	s	SLIDE "REF VIDEO"
SW3	1-516-576-00	s	SLIDE "75ohm ON/OFF"

Ref.No.	Parts No.	SP	Description
CP-74 BOARD			
	1-611-548-14	o	PRINTED CIRCUIT BOARD,CP-74
RV1	1-228-770-00	s	VAR,CARBON 5K "VIDEO"
RV2	1-228-770-00	s	VAR,CARBON 5K "CHROMA"
RV3	1-228-770-00	s	VAR,CARBON 5K "SET UP"
RV4	1-228-770-00	s	VAR,CARBON 5K "Y/C DELAY"
RV6	1-228-770-00	s	VAR,CARBON 5K "SYSTEM PHASE SYNC"
RV7	1-228-770-00	s	VAR,CARBON 5K "SYSTEM PHASE SC"
S1	1-516-226-00	s	SLIDE "PRESET/MANUAL FOR VIDEO"
S2	1-516-226-00	s	SLIDE "PRESET/MANUAL FOR CHROMA"
S3	1-516-226-00	s	SLIDE "PRESET/MANUAL FOR SET UP"
S4	1-516-226-00	s	SLIDE "PRESET/MANUAL FOR Y/C DELAY"
S6	1-516-226-00	s	SLIDE "AUDIO NR"
S7	1-516-226-00	s	SLIDE "VTR CONTROL"
S8	1-516-110-21	s	SLIDE "TBC CONTROL"
DE-11 BOARD			
	A-6739-018-A	s	PC BOARD ASS'Y,DM
DEC-8 BOARD			
	A-6711-514-A	o	MOUNTED CIRCUIT BOARD,DEC-8
C8	1-161-464-00	s	CERAMIC 270PF 5% 50V
C9	1-107-206-00	s	MICA 15PF 5% 500V
C11	1-107-202-00	s	MICA 10PF 5% 500V
C14	1-124-445-00	s	ELECT 100 20% 16V
C15	1-102-110-00	s	CERAMIC 220PF 10% 50V
C24	1-161-464-00	s	CERAMIC 270PF 5% 50V
C25	1-107-206-00	s	MICA 15PF 5% 500V
C27	1-107-202-00	s	MICA 10PF 5% 500V
C30	1-124-445-00	s	ELECT 100 20% 16V
C31	1-102-110-00	s	CERAMIC 220PF 10% 50V
C34	1-102-114-00	s	CERAMIC 470PF 10% 50V
C44	1-107-209-00	s	MICA 20PF 5% 500V
C46	1-107-209-00	s	MICA 20PF 5% 500V
C50	1-124-445-00	s	ELECT 100 20% 16V
C51	1-124-445-00	s	ELECT 100 20% 16V
C211	1-107-209-00	s	MICA 20PF 5% 500V
C513	1-124-445-00	s	ELECT 100 20% 16V
C517	1-124-445-00	s	ELECT 100 20% 16V
C602	1-124-475-11	s	ELECT 470 20% 16V
C604	1-124-475-11	s	ELECT 470 20% 16V
C606	1-124-472-11	s	ELECT 470 20% 10V
C608	1-124-472-11	s	ELECT 470 20% 10V
C801	1-107-202-00	s	MICA 10PF 5% 500V
C802	1-107-204-00	s	MICA 12PF 5% 500V
C803	1-124-470-11	s	ELECT 470 20% 6.3V
C805	1-124-445-00	s	ELECT 100 20% 16V
C807	1-124-445-00	s	ELECT 100 20% 16V
C808	1-124-445-00	s	ELECT 100 20% 16V
D202	8-719-911-19	s	1SS119
DL3	1-415-168-00	s	20ns x10

Ref.No.	Parts No.	SP	Description
IC1	8-759-907-93	s	uA796HC-B(FSC)
IC2	8-759-907-93	s	uA796HC-B(FSC)
IC3	8-759-240-53	s	TC4053BP(TOSHIBA)
IC4	8-749-936-51	s	BX365A(SONY)
IC5	8-749-936-51	s	BX365A(SONY)
IC6	8-759-990-82	s	TL082CP(TI)
IC7	8-759-240-53	s	TC4053BP(TOSHIBA)
IC8	8-759-990-82	s	TL082CP(TI)
IC9	8-759-131-11	s	uPC311C(NEC)
IC10	8-759-990-84	s	TL084CN(TI)
IC11	8-759-901-63	s	SN74LS163AN(TI)
IC12	8-759-301-24	s	HD10124(HITACHI)
IC13	8-759-301-31	s	HD10131(HITACHI)
IC14	8-759-001-13	s	MC10113L(MOTOROLA)
IC201	8-759-990-82	s	TL082CP(TI)
IC203	8-759-902-21	s	SN74LS221N(TI)
IC204	8-759-902-21	s	SN74LS221N(TI)
IC206	8-759-131-11	s	uPC311C(NEC)
IC207	8-759-902-21	s	SN74LS221N(TI)
IC208	8-759-240-13	s	TC4013BP(TOSHIBA)
IC209	8-759-220-00	s	TC40H000P(TOSHIBA)
IC301	8-759-902-21	s	SN74LS221N(TI)
IC302	8-759-900-69	s	SN74ALS74AN(TI)
IC303	8-759-901-64	s	SN74LS164N(TI)
IC304	8-759-901-64	s	SN74LS164N(TI)
IC305	8-759-902-21	s	SN74LS221(TI)
IC306	8-759-900-69	s	SN74ALS74AN(TI)
IC307	8-759-240-11	s	TC4011BP(TOSHIBA)
IC308	8-759-907-60	s	uA760HC(FSC)
IC801	8-749-936-51	s	BX365A(SONY)
JP1	1-560-733-00	s	PIN,SHORT
JP2	1-560-733-00	s	PIN,SHORT
JP201	1-560-733-00	s	PIN,SHORT
JP301	1-560-733-00	s	PIN,SHORT
JP302	1-560-733-00	s	PIN,SHORT
JP303	1-560-733-00	s	PIN,SHORT
JS1	1-561-832-00	s	SOCKET,SHORT
JS302	1-561-832-00	s	SOCKET,SHORT
JS303	1-561-832-00	s	SOCKET,SHORT
Q1	8-729-603-50	s	2SC403SP
Q2	8-729-603-50	s	2SC403SP
Q3	8-729-603-50	s	2SC403SP
Q4	8-729-603-50	s	2SC403SP
Q5	8-729-612-77	s	2SA1027R
Q6	8-729-201-04	s	2SC2878
Q7	8-729-603-50	s	2SC403SP
Q8	8-729-603-50	s	2SC403SP
Q9	8-729-603-50	s	2SC403SP
Q10	8-729-612-77	s	2SA1027R
Q11	8-729-201-04	s	2SC2878
Q21	8-729-603-50	s	2SC403SP
Q22	8-729-603-50	s	2SC403SP
Q23	8-729-603-50	s	2SC403SP
Q24	8-729-603-50	s	2SC403SP
Q202	8-729-364-12	s	2SC641K
Q801	8-729-612-77	s	2SA1027R
Q802	8-729-603-50	s	2SC403SP
Q803	8-729-612-77	s	2SA1027R
Q804	8-729-603-50	s	2SC403SP
Q805	8-729-612-77	s	2SA1027R
RV1	1-228-293-00	s	VAR,CERMET 5K
RV2	1-228-293-00	s	VAR,CERMET 5K
RV3	1-228-293-00	s	VAR,CERMET 5K
RV4	1-228-293-00	s	VAR,CERMET 5K
RV5	1-228-293-00	s	VAR,CERMET 5K

Ref.No.	Parts No.	SP	Description
RV6	1-228-292-00	s	VAR,CERMET 2K
RV7	1-228-292-00	s	VAR,CERMET 2K
RV8	1-228-292-00	s	VAR,CERMET 2K
RV9	1-228-292-00	s	VAR,CERMET 2K
RV151	1-228-293-00	s	VAR,CERMET 5K
RV171	1-228-293-00	s	VAR,CERMET 5K
RV201	1-228-293-00	s	VAR,CERMET 5K
RV202	1-228-293-00	s	VAR,CERMET 5K
RV302	1-228-307-00	s	VAR,CERMET 5K
RV304	1-228-294-00	s	VAR,CERMET 10K
RV305	1-228-294-00	s	VAR,CERMET 10K
RV801	1-228-291-00	s	VAR,CERMET 1K
RV802	1-228-290-00	s	VAR,CERMET 500
TH16	1-800-202-XX	s	S-10K
TH32	1-800-202-XX	s	S-10K
X1	1-527-585-00	s	VCO,17.374475MHz

Ref.No.	Parts No.	SP	Description
DEC-9 BOARD			
	A-6711-513-A	o	MOUNTED CIRCUIT BOARD,DEC-9
C2	1-107-048-00	s	MICA 6.8PF 500V
C3	1-107-202-00	s	MICA 10PF 5% 500V
C4	1-123-821-00	s	ELECT 47 20% 16V
C9	1-123-821-00	s	ELECT 47 20% 16V
C11	1-123-821-00	s	ELECT 47 20% 16V
C14	1-123-821-00	s	ELECT 47 20% 16V
C18	1-123-821-00	s	ELECT 47 20% 16V
C24	1-123-821-00	s	ELECT 47 20% 16V
C29	1-123-821-00	s	ELECT 47 20% 16V
C31	1-123-821-00	s	ELECT 47 20% 16V
C34	1-123-620-00	s	ELECT 10 20% 25V
C36	1-123-611-00	s	ELECT 1 20% 50V
C39	1-123-611-00	s	ELECT 1 20% 50V
C201	1-123-821-00	s	ELECT 47 20% 16V
C203	1-107-202-00	s	MICA 10PF 5% 500V
C204	1-107-202-00	s	MICA 10PF 5% 500V
C205	1-107-157-00	s	MICA 27PF 5% 500V
C206	1-107-159-00	s	MICA 33PF 5% 500V
C207	1-123-821-00	s	ELECT 47 20% 16V
C211	1-123-821-00	s	ELECT 47 20% 16V
C212	1-107-209-00	s	MICA 20PF 5% 500V
C218	1-107-157-00	s	MICA 27PF 5% 500V
C219	1-107-026-00	s	MICA 5.1PF 500V
C220	1-107-019-00	s	MICA 1PF 500V
C221	1-123-821-00	s	ELECT 47 20% 16V
C225	1-123-821-00	s	ELECT 47 20% 16V
C229	1-123-617-00	s	ELECT 10 20% 16V
C231	1-107-208-00	s	MICA 18PF 5% 500V
C232	1-107-047-00	s	MICA 5.6PF 500V
C234	1-123-613-00	s	ELECT 3.3 20% 50V
C235	1-123-822-00	s	ELECT 47 20% 10V
C237	1-123-617-00	s	ELECT 10 20% 16V
C240	1-107-202-00	s	MICA 10PF 5% 500V
C241	1-107-157-00	s	MICA 27PF 5% 500V
C242	1-107-202-00	s	MICA 10PF 5% 500V
C243	1-123-821-00	s	ELECT 47 20% 16V
C245	1-123-617-00	s	ELECT 10 20% 16V
C248	1-123-617-00	s	ELECT 10 20% 16V
C249	1-107-209-00	s	MICA 20PF 5% 500V
C250	1-107-204-00	s	MICA 12PF 5% 500V
C252	1-107-209-00	s	MICA 20PF 5% 500V
C253	1-107-204-00	s	MICA 12PF 5% 500V
C256	1-123-617-00	s	ELECT 10 20% 16V

Ref.No.	Parts No.	SP	Description
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
D4	8-719-911-19	s	1SS119
D5	8-719-911-19	s	1SS119
D6	8-719-911-19	s	1SS119
D7	8-719-911-19	s	1SS119
D8	8-719-911-19	s	1SS119
D9	8-719-911-19	s	1SS119
D10	8-719-911-19	s	1SS119
D11	8-719-100-27	s	RD4.7E-B2
D12	8-719-100-27	s	RD4.7E-B2
D13	8-719-162-07	s	RD6.2E
D14	8-719-911-19	s	1SS119
D15	8-719-911-19	s	1SS119
D18	8-719-911-19	s	1SS119
D19	8-719-911-19	s	1SS119
DL1	1-415-184-21	s	200ns
DL2	1-415-184-21	s	200ns
DL3	1-415-184-21	s	200ns
IC1	8-759-906-07	s	TL607CP(TI)
IC2	8-759-015-95	s	MC1595L(MOTOROLA)
IC3	8-759-990-84	s	TL084CN(TI)
IC4	8-759-990-84	s	TL084CN(TI)
IC5	8-759-906-07	s	TL607CP(TI)
IC6	8-759-902-21	s	SN74LS221N(TI)
IC7	8-759-902-21	s	SN74LS221N(TI)
IC8	8-759-902-21	s	SN74LS221N(TI)
IC9	8-759-900-74	s	SN74LS74AN(TI)
IC10	8-759-990-82	s	TL082CP(TI)
IC201	8-749-936-51	s	BX365A(SONY)
IC202	8-749-936-51	s	BX365A(SONY)
IC203	8-751-330-00	s	CX133A(SONY)
IC204	8-749-936-51	s	BX365A(SONY)
IC205	8-752-201-30	s	CX22013(SONY)
L8	1-459-155-00	s	45
L11	1-407-507-00	s	MICRO 18mH
L13	1-459-155-00	s	45
LV201	1-407-574-00	s	VAR,68
LV202	1-407-573-00	s	VAR,47
LV203	1-407-575-00	s	VAR,100

Ref.No.	Parts No.	SP	Description
Q1	8-729-117-54	s	2SA1175
Q2	8-729-117-54	s	2SA1175
Q3	8-724-375-01	s	2SC403C
Q4	8-724-375-01	s	2SC403C
Q5	8-729-117-54	s	2SA1175
Q6	8-729-201-04	s	2SC2878-B
Q7	8-729-201-04	s	2SC2878-B
Q8	8-724-375-01	s	2SC403C
Q9	8-729-112-06	s	2SA1206
Q10	8-724-375-01	s	2SC403C
Q11	8-729-112-06	s	2SA1206
Q12	8-724-375-01	s	2SC403C
Q13	8-724-375-01	s	2SC403C
Q14	8-729-117-54	s	2SA1175
Q15	8-729-117-54	s	2SA1175
Q16	8-729-112-06	s	2SA1206
Q17	8-729-112-06	s	2SA1206
Q18	8-724-375-01	s	2SC403C
Q201	8-724-375-01	s	2SC403C
Q202	8-729-117-54	s	2SA1175
Q203	8-724-375-01	s	2SC403C
Q204	8-729-117-54	s	2SA1175
Q205	8-724-375-01	s	2SC403C
Q206	8-729-117-54	s	2SA1175
Q207	8-724-375-01	s	2SC403C
Q208	8-724-375-01	s	2SC403C
Q209	8-724-375-01	s	2SC403C
Q210	8-729-117-54	s	2SA1175
Q211	8-724-375-01	s	2SC403C
Q212	8-724-375-01	s	2SC403C
Q213	8-729-117-54	s	2SA1175
Q214	8-724-375-01	s	2SC403C
Q215	8-729-117-54	s	2SA1175
Q216	8-724-375-01	s	2SC403C
R16	1-214-581-00	s	METAL 10K 1% 1/8W
R204	1-214-561-00	s	METAL 1.5K 1% 1/8W
R205	1-214-537-00	s	METAL 150 1% 1/8W
R211	1-214-546-00	s	METAL 360 1% 1/8W
R212	1-214-546-00	s	METAL 360 1% 1/8W
R214	1-214-564-00	s	METAL 2K 1% 1/8W
R216	1-214-564-00	s	METAL 2K 1% 1/8W
R217	1-214-581-00	s	METAL 10K 1% 1/8W
R219	1-214-546-00	s	METAL 360 1% 1/8W
R220	1-214-546-00	s	METAL 360 1% 1/8W
R227	1-214-530-00	s	METAL 75 1% 1/8W
R230	1-214-567-00	s	METAL 2.7K 1% 1/8W
R238	1-214-571-00	s	METAL 3.9K 1% 1/8W
R239	1-214-571-00	s	METAL 3.9K 1% 1/8W
R242	1-214-530-00	s	METAL 75 1% 1/8W
R247	1-214-546-00	s	METAL 360 1% 1/8W
R248	1-214-546-00	s	METAL 360 1% 1/8W

Ref.No.	Parts No.	SP	Description
RV1	1-228-294-00	s	VAR,CERMET 10K
RV2	1-228-294-00	s	VAR,CERMET 10K
RV3	1-224-939-00	s	VAR,CERMET 5K
RV4	1-228-295-00	s	VAR,CERMET 20K
RV201	1-228-292-00	s	VAR,CERMET 2K
RV203	1-228-292-00	s	VAR,CERMET 2K
RV204	1-228-291-00	s	VAR,CERMET 1K
RV205	1-228-290-00	s	VAR,CERMET 500
RV206	1-228-290-00	s	VAR,CERMET 500
RV208	1-228-292-00	s	VAR,CERMET 2K
RV209	1-228-292-00	s	VAR,CERMET 2K
RV210	1-228-293-00	s	VAR,CERMET 5K
T201	1-425-880-21	s	BURST AMP
X201	1-527-345-00	s	4.433619MHz

Ref.No.	Parts No.	SP	Description
DR-21 BOARD			
	A-6717-357-A	o	MOUNTED CIRCUIT BOARD,DR-21
C4	1-102-106-00	s	CERAMIC 100PF 10% 50V
C50	1-102-114-00	s	CERAMIC 470PF 10% 50V
C74	1-131-344-00	s	ELECT 0.33 10% 25V
C75	1-131-341-00	s	ELECT 0.1 10% 25V
C77	1-131-344-00	s	ELECT 0.33 10% 25V
C80	1-131-344-00	s	ELECT 0.33 10% 25V
C209	1-102-112-00	s	CERAMIC 330PF 10% 50V
C210	1-102-119-00	s	CERAMIC 0.0015 10% 50V
C224	1-101-004-00	s	CERAMIC 0.01 50V
C225	1-101-004-00	s	CERAMIC 0.01 50V
C226	1-101-004-00	s	CERAMIC 0.01 50V
C227	1-101-004-00	s	CERAMIC 0.01 50V
C228	1-101-004-00	s	CERAMIC 0.01 50V
C265	1-131-342-00	s	ELECT 0.15 10% 25V
C266	1-131-342-00	s	ELECT 0.15 10% 25V
C281	1-129-703-00	s	FILM 0.0012 10% 630V
CP1	1-464-139-00	s	BIAS
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
D4	8-719-911-19	s	1SS119
D5	8-719-911-19	s	1SS119
D6	8-719-911-19	s	1SS119
D7	8-719-911-19	s	1SS119
D8	8-719-911-19	s	1SS119
D9	8-719-911-19	s	1SS119
D10	8-719-911-19	s	1SS119
D11	8-719-911-19	s	1SS119
D12	8-719-911-19	s	1SS119
D13	8-719-911-19	s	1SS119
D14	8-719-168-07	s	RD6.8E-B
D207	8-719-911-19	s	1SS119
D208	8-719-911-19	s	1SS119
D209	8-719-911-19	s	1SS119
D210	8-719-911-19	s	1SS119
D211	8-719-200-02	s	10E-2
D212	8-719-200-02	s	10E-2
D213	8-719-200-02	s	10E-2
D214	8-719-200-02	s	10E-2
D215	8-719-911-19	s	1SS119
D216	8-719-911-19	s	1SS119
D217	8-719-911-19	s	1SS119
D218	8-719-200-02	s	10E-2
D219	8-719-200-02	s	10E-2
D220	8-719-200-02	s	10E-2
D221	8-719-200-02	s	10E-2
D222	8-719-911-19	s	1SS119
D223	8-719-911-19	s	1SS119
D224	8-719-911-19	s	1SS119
D225	8-719-911-19	s	1SS119
D226	8-719-911-19	s	1SS119
D227	8-719-136-07	s	RD3.6E-B

Ref.No.	Parts No.	SP	Description
IC1	8-759-729-03	s	NJM2903D(JRC)
IC2	8-759-745-56	s	NJM4556D(JRC)
IC3	8-759-729-03	s	NJM2903D(JRC)
IC4	8-752-006-10	s	CX20061(SONY)
IC5	8-752-006-10	s	CX20061(SONY)
IC6	8-759-345-38	s	HD14538BP(HITACHI)
IC7	8-752-006-10	s	CX20061(SONY)
IC8	8-752-006-10	s	CX20061(SONY)
IC9	8-759-729-03	s	NJM2903D(JRC)
IC10	8-752-006-10	s	CX20061(SONY)
IC11	8-752-006-10	s	CX20061(SONY)
IC12	8-759-700-62	s	NJM4562D(JRC)
IC13	8-752-006-10	s	CX20061(SONY)
IC14	8-752-006-10	s	CX20061(SONY)
IC15	8-759-345-38	s	HD14538BP(HITACHI)
IC16	8-759-145-57	s	uPC4557C(NEC)
IC17	8-759-240-81	s	TC4081BP(TOSHIBA)
IC18	8-759-145-57	s	uPC4557C(NEC)
IC19	8-759-700-62	s	NJM4562D(JRC)
IC200	8-759-240-71	s	TC4071BP(TOSHIBA)
IC201	8-759-900-37	s	SN74LS37N(TI)
IC202	8-759-645-23	s	M54523P(MITSUBISHI)
IC203	8-759-600-24	s	M54543L(MITSUBISHI)
IC204	8-759-240-01	s	TC4001BP(TOSHIBA)
IC205	8-759-600-61	s	M54529AP(MITSUBISHI)
IC206	8-759-600-24	s	M54543L(MITSUBISHI)
IC207	8-759-240-49	s	TC4049BP(TOSHIBA)
IC208	8-759-600-61	s	M54529AP(MITSUBISHI)
IC209	8-759-940-94	s	MSM4094RS(OKI)
IC210	8-759-240-50	s	TC4050BP(TOSHIBA)
IC211	8-759-600-34	s	M54532P(MITSUBISHI)
IC212	8-759-645-23	s	M54523P(MITSUBISHI)
IC213	8-759-240-49	s	TC4049BP(TOSHIBA)
IC214	8-759-940-94	s	MSM4094RS(OKI)
IC215	8-759-145-84	s	uPD4584BC(NEC)
IC216	8-759-240-21	s	TC4021BP(TOSHIBA)
IC217	8-759-145-84	s	uPD4584BC(NEC)
IC218	8-743-420-00	s	BX342(SONY)
IC219	8-743-430-00	s	BX343(SONY)
IC220	8-743-420-00	s	BX342(SONY)
L1	1-459-155-00	s	45
L2	1-459-155-00	s	45
L201	1-407-496-00	s	MICRO 2.2mH
L202	1-407-510-00	s	MICRO 33mH
L203	1-407-510-00	s	MICRO 33mH
Q1	8-729-201-05	s	2SC2878-B
Q2	8-729-663-47	s	2SC1364
Q3	8-729-663-47	s	2SC1364
Q4	8-729-201-05	s	2SC2878-B
Q5	8-729-201-05	s	2SC2878-B
Q6	8-729-201-05	s	2SC2878-B
Q7	8-729-663-47	s	2SC1364
Q8	8-729-663-47	s	2SC1364
Q9	8-729-663-47	s	2SC1364
Q10	8-729-663-47	s	2SC1364
Q11	8-729-663-47	s	2SC1364
Q12	8-729-663-47	s	2SC1364
Q13	8-729-800-42	s	2SK152
Q14	8-729-612-77	s	2SA1027R
Q15	8-729-663-47	s	2SC1364
Q16	8-729-663-47	s	2SC1364
Q17	8-729-663-47	s	2SC1364
Q18	8-729-663-47	s	2SC1364
Q19	8-729-663-47	s	2SC1364
Q213	8-729-374-02	s	2SB740
Q214	8-729-201-05	s	2SC2878-B
Q215	8-729-663-47	s	2SC1364
Q216	8-729-663-47	s	2SC1364
Q217	8-729-117-54	s	2SA1175
R68	1-212-717-00	s	METAL 430K 1% 1/2W
RV1	1-228-292-00	s	VAR,CERMET 2K
RV2	1-224-939-00	s	VAR,CERMET 5K
RV3	1-224-939-00	s	VAR,CERMET 5K
RV4	1-224-939-00	s	VAR,CERMET 5K
RV201	1-228-298-00	s	VAR,CERMET 200K
RV202	1-228-298-00	s	VAR,CERMET 200K
RV203	1-228-288-00	s	VAR,CERMET 100

DU-53 BOARD

	A-6715-211-A	o	MOUNTED CIRCUIT BOARD,DU-53
IC1	8-759-145-58	s	uPC4558C(NEC)
IC2	8-759-145-58	s	uPC4558C(NEC)

EN-21 BOARD

Ref.No.	Parts No.	SP	Description
	A-6711-512-A	o	MOUNTED CIRCUIT BOARD,EN-21
C6	1-123-616-00	s	ELECT 4.7 20% 25V
C7	1-123-616-00	s	ELECT 4.7 20% 25V
C11	1-123-617-00	s	ELECT 10 20% 16V
C12	1-123-821-00	s	ELECT 47 20% 16V
C14	1-107-159-00	s	MICA 33PF 5% 500V
C16	1-107-157-00	s	MICA 27PF 5% 500V
C18	1-107-157-00	s	MICA 27PF 5% 500V
C19	1-123-617-00	s	ELECT 10 20% 16V
C26	1-123-616-00	s	ELECT 4.7 20% 25V
C30	1-123-617-00	s	ELECT 10 20% 16V
C31	1-123-617-00	s	ELECT 10 20% 16V
C34	1-123-617-00	s	ELECT 10 20% 16V
C36	1-123-821-00	s	ELECT 47 20% 16V
C37	1-124-119-00	s	ELECT 330 20% 16V
C40	1-123-821-00	s	ELECT 47 20% 16V
C41	1-123-617-00	s	ELECT 10 20% 16V
C42	1-107-211-00	s	MICA 24PF 5% 500V
C43	1-107-211-00	s	MICA 24PF 5% 500V
C45	1-123-617-00	s	ELECT 10 20% 16V
C46	1-123-616-00	s	ELECT 4.7 20% 25V
C47	1-107-211-00	s	MICA 24PF 5% 500V
C48	1-107-211-00	s	MICA 24PF 5% 500V
C50	1-123-617-00	s	ELECT 10 20% 16V
C52	1-123-821-00	s	ELECT 47 20% 16V
C53	1-123-822-00	s	ELECT 47 20% 10V
C54	1-123-822-00	s	ELECT 47 20% 10V
C55	1-123-617-00	s	ELECT 10 20% 16V
C59	1-123-617-00	s	ELECT 10 20% 16V
C67	1-123-821-00	s	ELECT 47 20% 16V
C69	1-123-821-00	s	ELECT 47 20% 16V
C72	1-123-617-00	s	ELECT 10 20% 16V
C73	1-123-822-00	s	ELECT 47 20% 10V
C76	1-123-821-00	s	ELECT 47 20% 16V
C78	1-123-821-00	s	ELECT 47 20% 16V
C79	1-123-821-00	s	ELECT 47 20% 16V
C81	1-123-821-00	s	ELECT 47 20% 16V
C83	1-123-821-00	s	ELECT 47 20% 16V
C85	1-123-822-00	s	ELECT 47 20% 10V
C89	1-123-821-00	s	ELECT 47 20% 16V
C92	1-123-821-00	s	ELECT 47 20% 16V
C94	1-123-821-00	s	ELECT 47 20% 16V
C95	1-123-822-00	s	ELECT 47 20% 10V
C96	1-123-822-00	s	ELECT 47 20% 10V
C97	1-123-822-00	s	ELECT 47 20% 10V
C98	1-123-822-00	s	ELECT 47 20% 10V
C99	1-123-822-00	s	ELECT 47 20% 10V
C100	1-123-822-00	s	ELECT 47 20% 10V
C101	1-123-617-00	s	ELECT 10 20% 16V
C102	1-123-821-00	s	ELECT 47 20% 16V
C105	1-123-821-00	s	ELECT 47 20% 16V
C107	1-123-821-00	s	ELECT 47 20% 16V
C108	1-123-617-00	s	ELECT 10 20% 16V
C109	1-123-821-00	s	ELECT 47 20% 16V
C111	1-123-616-00	s	ELECT 4.7 20% 25V
C116	1-123-617-00	s	ELECT 10 20% 16V
C117	1-123-821-00	s	ELECT 47 20% 16V
C119	1-107-159-00	s	MICA 33PF 5% 500V
C120	1-123-622-00	s	ELECT 22 20% 16V
C121	1-123-617-00	s	ELECT 10 20% 16V
C130	1-107-158-00	s	MICA 30PF 5% 500V
C160	1-123-616-00	s	ELECT 4.7 20% 25V
C164	1-107-049-00	s	MICA 8.2PF 500V
C201	1-123-622-00	s	ELECT 22 20% 16V
C203	1-123-622-00	s	ELECT 22 20% 16V
C206	1-123-617-00	s	ELECT 10 20% 16V
C207	1-123-617-00	s	ELECT 10 20% 16V
C208	1-123-821-00	s	ELECT 47 20% 16V
C210	1-107-159-00	s	MICA 33PF 5% 500V
C212	1-123-821-00	s	ELECT 47 20% 16V
C214	1-107-209-00	s	MICA 20PF 5% 500V
C217	1-123-821-00	s	ELECT 47 20% 16V
C219	1-123-821-00	s	ELECT 47 20% 16V
C224	1-107-203-00	s	MICA 11PF 5% 500V
C228	1-123-622-00	s	ELECT 22 20% 16V
C230	1-123-622-00	s	ELECT 22 20% 16V
C233	1-123-617-00	s	ELECT 10 20% 16V
C234	1-123-617-00	s	ELECT 10 20% 16V
C235	1-123-821-00	s	ELECT 47 20% 16V
C237	1-123-821-00	s	ELECT 47 20% 16V
C239	1-107-159-00	s	MICA 33PF 5% 500V
C241	1-107-209-00	s	MICA 20PF 5% 500V
C244	1-123-821-00	s	ELECT 47 20% 16V
C246	1-123-821-00	s	ELECT 47 20% 16V
C247	1-108-555-00	s	MYLAR 0.001 5% 50V
C249	1-123-821-00	s	ELECT 47 20% 16V
C251	1-123-821-00	s	ELECT 47 20% 16V
C254	1-108-555-00	s	MYLAR 0.001 5% 50V
C280	1-102-074-00	s	CERAMIC 0.001 10% 50V
C401	1-107-211-00	s	MICA 24PF 5% 500V
C402	1-123-821-00	s	ELECT 47 20% 16V
C405	1-123-821-00	s	ELECT 47 20% 16V
C409	1-123-821-00	s	ELECT 47 20% 16V
C412	1-123-821-00	s	ELECT 47 20% 16V
C417	1-123-821-00	s	ELECT 47 20% 16V
C420	1-123-821-00	s	ELECT 47 20% 16V
C421	1-107-202-00	s	MICA 10PF 5% 500V
C422	1-123-821-00	s	ELECT 47 20% 16V
C423	1-123-821-00	s	ELECT 47 20% 16V
C427	1-107-202-00	s	MICA 10PF 5% 500V
C428	1-123-821-00	s	ELECT 47 20% 16V
C431	1-123-821-00	s	ELECT 47 20% 16V
C434	1-123-821-00	s	ELECT 47 20% 16V
C438	1-123-821-00	s	ELECT 47 20% 16V
C440	1-123-821-00	s	ELECT 47 20% 16V
C441	1-123-821-00	s	ELECT 47 20% 16V
C444	1-123-821-00	s	ELECT 47 20% 16V
C450	1-123-821-00	s	ELECT 47 20% 16V
C451	1-123-821-00	s	ELECT 47 20% 16V
C501	1-123-821-00	s	ELECT 47 20% 16V
C503	1-123-821-00	s	ELECT 47 20% 16V
C509	1-123-821-00	s	ELECT 47 20% 16V
C511	1-123-821-00	s	ELECT 47 20% 16V
C513	1-124-472-11	s	ELECT 470 20% 10V
C514	1-123-821-00	s	ELECT 47 20% 16V
C517	1-123-821-00	s	ELECT 47 20% 16V
C518	1-107-159-00	s	MICA 33PF 5% 500V

Ref.No.	Parts No.	SP	Description
C521	1-123-821-00	s	ELECT 47 20% 16V
C522	1-123-821-00	s	ELECT 47 20% 16V
C524	1-107-159-00	s	MICA 33PF 5% 500V
C527	1-123-821-00	s	ELECT 47 20% 16V
C530	1-123-821-00	s	ELECT 47 20% 16V
C608	1-123-822-00	s	ELECT 47 20% 10V
C609	1-123-821-00	s	ELECT 47 20% 16V
C610	1-123-821-00	s	ELECT 47 20% 16V
C613	1-123-821-00	s	ELECT 47 20% 16V
C614	1-123-821-00	s	ELECT 47 20% 16V
C630	1-123-821-00	s	ELECT 47 20% 16V
C634	1-123-821-00	s	ELECT 47 20% 16V
C635	1-107-157-00	s	MICA 27PF 5% 500V
C641	1-123-821-00	s	ELECT 47 20% 16V
C648	1-123-821-00	s	ELECT 47 20% 16V
C670	1-107-210-00	s	MICA 22PF 5% 500V
C701	1-123-622-00	s	ELECT 22 20% 16V
C703	1-123-622-00	s	ELECT 22 20% 16V
C706	1-123-617-00	s	ELECT 10 20% 16V
C707	1-123-617-00	s	ELECT 10 20% 16V
C708	1-123-821-00	s	ELECT 47 20% 16V
C710	1-107-159-00	s	MICA 33PF 5% 500V
C712	1-123-821-00	s	ELECT 47 20% 16V
C728	1-123-622-00	s	ELECT 22 20% 16V
C730	1-123-622-00	s	ELECT 22 20% 16V
C733	1-123-617-00	s	ELECT 10 20% 16V
C734	1-123-617-00	s	ELECT 10 20% 16V
C735	1-123-821-00	s	ELECT 47 20% 16V
C737	1-123-821-00	s	ELECT 47 20% 16V
C739	1-107-159-00	s	MICA 33PF 5% 500V
C747	1-108-555-00	s	MYLAR 0.001 5% 50V
C749	1-123-821-00	s	ELECT 47 20% 16V
C805	1-107-158-00	s	MICA 30PF 5% 500V
C807	1-102-116-00	s	CERAMIC 680PF 10% 50V
C808	1-102-116-00	s	CERAMIC 680PF 10% 50V
CV601	1-141-240-00	s	TRIMMER 20PF
D1	8-719-143-07	s	RD4.3E-B
D2	8-719-143-07	s	RD4.3E-B
D3	8-719-911-19	s	1SS119
D4	8-719-911-19	s	1SS119
D10	8-719-911-19	s	1SS119
D11	8-719-911-19	s	1SS119
D105	8-719-101-97	s	1SS97-1
D201	8-719-162-07	s	RD6.2E-B
D202	8-719-162-07	s	RD6.2E-B
D203	8-719-911-19	s	1SS119
D204	8-719-911-19	s	1SS119
D205	8-719-911-19	s	1SS119
D401	8-719-162-07	s	RD6.2E-B
D603	8-719-911-19	s	1SS119
D701	8-719-162-07	s	RD6.2E-B
D702	8-719-162-07	s	RD6.2E-B
D703	8-719-911-19	s	1SS119
D704	8-719-162-07	s	RD6.2E-B
D801	8-719-911-19	s	1SS119
D802	8-719-911-19	s	1SS119
D803	8-719-911-19	s	1SS119

Ref.No.	Parts No.	SP	Description
DL501	1-415-184-00	s	100ns
FL601	1-231-578-00	s	LPF
IC1	8-759-201-40	s	TL8605P(TOSHIBA)
IC2	8-759-201-40	s	TL8605P(TOSHIBA)
IC3	8-759-708-08	s	NJM78L08A(JRC)
IC4	8-759-906-01	s	TL601CP(TI)
IC5	8-759-240-11	s	TC4011BP(TOSHIBA)
IC201	8-749-936-51	s	BX365A(SONY)
IC202	8-759-926-10	s	TL610CP(TI)
IC203	8-759-145-57	s	uPC4557C(NEC)
IC204	8-759-602-06	s	M5109P(MITSUBISHI)
IC205	8-759-907-93	s	uA796HC-B(FSC)
IC206	8-749-936-51	s	BX365A(SONY)
IC207	8-759-926-10	s	TL610CP(TI)
IC208	8-759-145-57	s	uPC4557C(NEC)
IC209	8-759-602-06	s	M5109P(MITSUBISHI)
IC210	8-759-907-93	s	uA796HC-B(FSC)
IC211	8-759-902-21	s	SN74LS221N(TI)
IC212	8-759-951-10	s	SN75110AN(TI)
IC213	8-759-902-21	s	SN74LS221N(TI)
IC214	8-759-240-53	s	TC4053BP(TOSHIBA)
IC215	8-759-145-57	s	uPC4557C(NEC)
IC401	8-759-907-60	s	uA760HC(FSC)
IC402	8-759-900-10	s	SN74LS10N(TI)
IC403	8-749-938-10	s	BX381(SONY)
IC405	8-759-974-06	s	SN7406N(TI)
IC406	8-759-907-60	s	uA760HC(FSC)
IC407	8-759-901-63	s	SN74LS163AN(TI)
IC408	8-759-990-82	s	TL082CP(TI)
IC409	8-759-901-23	s	SN74LS123N(TI)
IC410	8-759-001-24	s	MC10124L(MOTOROLA)
IC411	8-759-301-31	s	HD10131(HITACHI)
IC412	8-759-001-13	s	MC10113L(MOTOROLA)
IC501	8-749-938-80	s	BX388(SONY)
IC502	8-749-936-61	s	BX366A(SONY)
IC503	8-749-936-61	s	BX366A(SONY)
IC504	8-759-220-00	s	TC40H000P(TOSHIBA)
IC505	8-759-974-06	s	SN7406N(TI)
IC506	8-749-936-51	s	BX365A(SONY)
IC507	8-752-006-10	s	CX20061(SONY)
IC605	8-749-936-61	s	BX366A(SONY)
IC607	8-749-936-61	s	BX366A(SONY)
IC609	8-759-906-07	s	TL607CP(TI)
IC610	8-759-906-07	s	TL607CP(TI)
IC613	8-741-105-60	s	BX1056(SONY)
IC614	8-749-938-90	s	BX389(SONY)
IC616	8-759-278-09	s	TA78L009AP(TOSHIBA)
IC617	8-759-208-94	s	CX894(SONY)
IC618	8-759-902-21	s	SN74LS221N(TI)
IC619	8-759-902-21	s	SN74LS221N(TI)
IC701	8-749-936-51	s	BX365A(SONY)
IC702	8-759-926-10	s	TL610CP(TI)
IC703	8-759-145-57	s	uPC4557C(NEC)
IC704	8-759-602-06	s	M5109P(MITSUBISHI)
IC706	8-749-936-51	s	BX365A(SONY)

Ref.No.	Parts No.	SP	Description
IC707	8-759-926-10	s	TL610CP(TI)
IC708	8-759-145-57	s	uPC4557C(NEC)
IC709	8-759-602-06	s	M5109P(MITSUBISHI)
IC711	8-759-902-21	s	SN74LS221N(TI)
IC801	8-759-902-21	s	SN74LS221N(TI)
IC802	8-759-902-21	s	SN74LS221N(TI)
IC803	8-759-900-74	s	SN74LS74AN(TI)
IC804	8-759-900-02	s	SN74LS02N(TI)
IC805	8-759-907-60	s	uA760HC(FSC)
IC806	8-759-103-19	s	uPC319C(NEC)
IC807	8-759-900-74	s	SN74LS74AN(TI)
IC808	8-759-900-10	s	SN74LS10N(TI)
L901	1-421-329-00	s	COIL CHOKE
L902	1-421-329-00	s	COIL CHOKE
L903	1-421-329-00	s	COIL CHOKE
L904	1-421-329-00	s	COIL CHOKE
LV1	1-407-569-00	s	VAR,10
LV501	1-407-575-00	s	VAR,100
LV601	1-407-573-00	s	VAR,47
Q1	8-724-375-01	s	2SC403C
Q2	8-724-375-01	s	2SC403C
Q3	8-729-110-53	s	2SA1005
Q4	8-729-110-53	s	2SA1005
Q5	8-724-375-01	s	2SC403C
Q6	8-729-602-67	s	2SA1026-7
Q7	8-724-375-01	s	2SC403C
Q8	8-729-602-67	s	2SA1026-7
Q9	8-724-375-01	s	2SC403C
Q10	8-724-375-01	s	2SC403C
Q11	8-729-602-67	s	2SA1026-7
Q12	8-724-375-01	s	2SC403C
Q13	8-729-602-67	s	2SA1026-7
Q14	8-724-375-01	s	2SC403C
Q15	8-729-602-67	s	2SA1026-7
Q16	8-724-375-01	s	2SC403C
Q17	8-724-375-01	s	2SC403C
Q18	8-724-375-01	s	2SC403C
Q19	8-729-190-12	s	2SC2901
Q20	8-724-375-01	s	2SC403C
Q21	8-729-190-12	s	2SC2901
Q23	8-729-190-12	s	2SC2901
Q25	8-729-110-53	s	2SA1005
Q27	8-729-110-53	s	2SA1005
Q28	8-729-190-12	s	2SC2901
Q29	8-729-190-12	s	2SC2901
Q30	8-729-190-12	s	2SC2901
Q31	8-724-375-01	s	2SC403C
Q32	8-729-602-67	s	2SA1026-7
Q33	8-729-110-53	s	2SA1005
Q35	8-729-190-12	s	2SC2901
Q37	8-729-190-12	s	2SC2901
Q38	8-729-110-53	s	2SA1005
Q39	8-729-110-53	s	2SA1005
Q40	8-729-110-53	s	2SA1005
Q41	8-729-110-53	s	2SA1005
Q42	8-729-110-53	s	2SA1005
Q43	8-729-110-53	s	2SA1005
Q44	8-729-190-12	s	2SC2901
Q45	8-729-190-12	s	2SC2901

Ref.No.	Parts No.	SP	Description
Q46	8-729-110-53	s	2SA1005
Q47	8-729-190-12	s	2SC2901
Q48	8-729-190-12	s	2SC2901
Q49	8-729-190-12	s	2SC2901
Q50	8-729-110-53	s	2SA1005
Q51	8-729-110-53	s	2SA1005
Q52	8-729-190-12	s	2SC2901
Q53	8-724-375-01	s	2SC403C
Q54	8-729-602-67	s	2SA1026-7
Q55	8-729-602-67	s	2SA1026-7
Q56	8-724-375-01	s	2SC403C
Q101	8-724-375-01	s	2SC403C
Q102	8-729-602-67	s	2SA1026-7
Q201	8-724-375-01	s	2SC403C
Q202	8-724-375-01	s	2SC403C
Q203	8-724-375-01	s	2SC403C
Q204	8-724-375-01	s	2SC403C
Q205	8-729-602-67	s	2SA1026-7
Q206	8-724-375-01	s	2SC403C
Q501	8-724-375-01	s	2SC403C
Q502	8-724-375-01	s	2SC403C
Q503	8-729-384-47	s	2SA844
Q504	8-729-201-05	s	2SC2878-B
Q505	8-729-201-05	s	2SC2878-B
Q506	8-729-201-05	s	2SC2878-B
Q507	8-729-384-47	s	2SA844
Q508	8-724-375-01	s	2SC403C
Q509	8-729-384-47	s	2SA844
Q601	8-729-173-37	s	2SA733-P
Q602	8-729-173-37	s	2SA733-P
Q605	8-724-375-01	s	2SC403C
Q607	8-724-375-01	s	2SC403C
Q608	8-724-375-01	s	2SC403C
Q609	8-724-375-01	s	2SC403C
Q610	8-724-375-01	s	2SC403C
Q701	8-724-375-01	s	2SC403C
Q703	8-724-375-01	s	2SC403C
Q801	8-724-375-01	s	2SC403C
RV1	1-228-292-00	s	VAR,CERMET 2K
RV2	1-228-294-00	s	VAR,CERMET 10K
RV3	1-228-295-00	s	VAR,CERMET 20K
RV4	1-228-289-00	s	VAR,CERMET 200
RV5	1-228-295-00	s	VAR,CERMET 20K
RV6	1-228-292-00	s	VAR,CERMET 2K
RV7	1-228-295-00	s	VAR,CERMET 20K
RV8	1-228-295-00	s	VAR,CERMET 20K
RV9	1-228-295-00	s	VAR,CERMET 20K
RV12	1-228-295-00	s	VAR,CERMET 20K
RV13	1-228-295-00	s	VAR,CERMET 20K
RV14	1-228-292-00	s	VAR,CERMET 2K
RV16	1-228-293-00	s	VAR,CERMET 5K
RV121	1-228-297-00	s	VAR,CERMET 100K
RV122	1-228-297-00	s	VAR,CERMET 100K

Ref.No.	Parts No.	SP	Description
RV201	1-228-294-00	s	VAR,CERMET 10K
RV202	1-228-294-00	s	VAR,CERMET 10K
RV203	1-228-294-00	s	VAR,CERMET 10K
RV204	1-228-290-00	s	VAR,CERMET 500
RV205	1-228-294-00	s	VAR,CERMET 10K
RV206	1-228-293-00	s	VAR,CERMET 5K
RV207	1-228-293-00	s	VAR,CERMET 5K
RV208	1-228-292-00	s	VAR,CERMET 2K
RV209	1-228-293-00	s	VAR,CERMET 5K
RV210	1-228-293-00	s	VAR,CERMET 5K
RV402	1-228-292-00	s	VAR,CERMET 2K
RV403	1-228-297-00	s	VAR,CERMET 100K
RV501	1-228-291-00	s	VAR,CERMET 1K
RV502	1-228-291-00	s	VAR,CERMET 1K
RV503	1-228-293-00	s	VAR,CERMET 5K
RV504	1-228-291-00	s	VAR,CERMET 1K
RV602	1-228-291-00	s	VAR,CERMET 1K
RV603	1-228-291-00	s	VAR,CERMET 1K
RV607	1-224-936-00	s	VAR,CERMET 500
RV608	1-228-293-00	s	VAR,CERMET 5K
RV609	1-228-294-00	s	VAR,CERMET 10K
RV610	1-228-293-00	s	VAR,CERMET 5K
RV701	1-228-294-00	s	VAR,CERMET 10K
RV703	1-228-294-00	s	VAR,CERMET 10K
RV706	1-228-293-00	s	VAR,CERMET 5K
RV802	1-228-293-00	s	VAR,CERMET 5K
RV804	1-228-293-00	s	VAR,CERMET 5K
S1	1-552-509-00	s	DIP
S401	1-552-509-00	s	DIP
S501	1-552-509-00	s	DIP
S502	1-552-509-00	s	DIP
S801	1-552-509-00	s	DIP
TH1	1-800-194-11	s	S-90
TH2	1-800-202-XX	s	S-10K
X1	1-567-076-00	s	10.700MHz
X401	1-527-585-00	s	VCO 17.734475MHz
X601	1-527-374-00	s	5.357422MHz

Ref.No.	Parts No.	SP	Description
HE-5 BOARD			
	1-608-056-00	o	PRINTED CIRCUIT BOARD,HE-5
HP-11 BOARD			
	1-611-545-00	o	PRINTED CIRCUIT BOARD,HP-11
J1	1-507-553-00	s	JACK "HEADPHONES"
RV1	1-226-140-00	s	VAR,20K/20K "HEADPHONES"
KEY CHASSIS			
	A-6734-202-A	o	KEY CHASSIS ASS'Y WITH KY-45, KY-47, DP-31, PT-9, PC-9 AND PC-14 BOARDS
	1-557-236-11	o	FLAT CABLE,6P "KY-45 TO KY-47"
	1-557-237-11	o	FLAT CABLE,23P "KY-45 TO DP-31"
DP-31 BOARD			
	1-611-551-00	o	PRINTED CIRCUIT BOARD,DP-31
D1	8-719-803-21	s	LED,7-SEG TLR-321
D2	8-719-803-21	s	LED,7-SEG TLR-321
D3	8-719-803-21	s	LED,7-SEG TLR-321
D4	8-719-803-21	s	LED,7-SEG TLR-321
S25	1-552-539-00	s	KEY "LAP"
S26	1-552-539-00	s	KEY "RESET"
S27	1-552-539-00	s	KEY "PLAYER"
S28	1-552-539-00	s	KEY "RECORDER"
KY-45 BOARD			
C28	1-102-106-00	s	CERAMIC 100PF 10% 50V
C29	1-102-114-00	s	CERAMIC 470PF 10% 50V
C30	1-102-114-00	s	CERAMIC 470PF 10% 50V
C31	1-102-114-00	s	CERAMIC 470PF 10% 50V
C32	1-102-114-00	s	CERAMIC 470PF 10% 50V
C50	1-102-114-00	s	CERAMIC 470PF 10% 50V
C51	1-102-114-00	s	CERAMIC 470PF 10% 50V
C52	1-102-114-00	s	CERAMIC 470PF 10% 50V
C53	1-102-106-00	s	CERAMIC 100PF 10% 50V
C54	1-102-106-00	s	CERAMIC 100PF 10% 50V
C55	1-102-106-00	s	CERAMIC 100PF 10% 50V
C56	1-102-106-00	s	CERAMIC 100PF 10% 50V

Ref.No.	Parts No.	SP	Description
CN1	1-560-454-00	s	40P
CN4	1-560-538-00	s	6P
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
D4	8-719-911-19	s	1SS119
D5	8-719-911-19	s	1SS119
D6	8-719-911-19	s	1SS119
D7	8-719-911-19	s	1SS119
D8	8-719-911-19	s	1SS119
D9	8-719-911-19	s	1SS119
D10	8-719-911-19	s	1SS119
D11	8-719-911-19	s	1SS119
D12	8-719-911-19	s	1SS119
D13	8-719-911-19	s	1SS119
D14	8-719-911-19	s	1SS119
D15	8-719-911-19	s	1SS119
D16	8-719-911-19	s	1SS119
D17	8-719-911-19	s	1SS119
D18	8-719-911-19	s	1SS119
D19	8-719-911-19	s	1SS119
D20	8-719-911-19	s	1SS119
D21	8-719-911-19	s	1SS119
D22	8-719-911-19	s	1SS119
D23	8-719-911-19	s	1SS119
D24	8-719-911-19	s	1SS119
D25	8-719-911-19	s	1SS119
D26	8-719-911-19	s	1SS119
D27	8-719-911-19	s	1SS119
D28	8-719-911-19	s	1SS119
D29	8-719-911-19	s	1SS119
D30	8-719-911-19	s	1SS119
D31	8-719-911-19	s	1SS119
D32	8-719-911-19	s	1SS119
D33	8-719-911-19	s	1SS119
D34	8-719-911-19	s	1SS119
D35	8-719-911-19	s	1SS119
D36	8-719-911-19	s	1SS119
D37	8-719-911-19	s	1SS119
D38	8-719-911-19	s	1SS119
D39	8-719-911-19	s	1SS119
D40	8-719-911-19	s	1SS119
D41	8-719-911-19	s	1SS119
D42	8-719-911-19	s	1SS119
D43	8-719-904-55	s	LED,GL-5HD5 "PLAYER"
D44	8-719-904-55	s	LED,GL-5HD5 "RECORDER"
D45	8-719-911-19	s	1SS119
D46	8-719-911-19	s	1SS119
D47	8-719-911-19	s	1SS119
D48	8-719-911-19	s	1SS119
D49	8-719-904-55	s	LED,GL-5HD5 "STILL"
D50	8-719-911-19	s	1SS119
D51	8-719-911-19	s	1SS119
D52	8-719-911-19	s	1SS119
D53	8-719-911-19	s	1SS119
D54	8-719-911-19	s	1SS119
D55	8-719-911-19	s	1SS119

Ref.No.	Parts No.	SP	Description
D56	8-719-911-19	s	1SS119
D57	8-719-911-19	s	1SS119
D58	8-719-911-19	s	1SS119
D59	8-719-911-19	s	1SS119
D60	8-719-911-19	s	1SS119
D61	8-719-911-19	s	1SS119
D62	8-719-911-19	s	1SS119
D63	8-719-911-19	s	1SS119
D64	8-719-911-19	s	1SS119
D65	8-719-904-55	s	LED,GL-5HD5 "SHUTTLE"
D66	8-719-904-55	s	LED,GL-5HD5 "JOG"
IC1	8-759-600-61	s	M54529AP(MITSUBISHI)
IC2	8-759-200-50	s	TC40H374P(TOSHIBA)
IC3	8-759-600-61	s	M54529AP(MITSUBISHI)
IC4	8-759-600-61	s	M54529AP(MITSUBISHI)
IC5	8-759-245-16	s	TC4516BP(TOSHIBA)
IC6	8-759-645-17	s	M54517P(MITSUBISHI)
IC7	8-759-240-50	s	TC4050BP(TOSHIBA)
IC8	8-759-040-70	s	MC14070BCP(MOTOROLA)
IC9	8-759-240-11	s	TC4011BP(TOSHIBA)
IC10	8-759-600-61	s	M54529AP(MITSUBISHI)
IC11	8-759-240-13	s	TC4013BP(TOSHIBA)
IC12	8-759-200-96	s	TC4519BP(TOSHIBA)
IC13	8-759-200-39	s	TC40H240P(TOSHIBA)
IC14	8-759-200-22	s	TC40H138P(TOSHIBA)
IC15	8-759-901-38	s	SN74LS138N(TI)
IC16	8-759-901-38	s	SN74LS138N(TI)
IC17	8-759-600-61	s	M54529AP(MITSUBISHI)
IC18	8-759-045-84	s	MC14584BCP(MOTOROLA)
IC19	8-759-045-84	s	MC14584BCP(MOTOROLA)
IC20	8-759-645-17	s	M54517P(MITSUBISHI)
IC21	8-759-200-43	s	TC40H244P(TOSHIBA)
IC22	8-759-600-61	s	M54529AP(MITSUBISHI)
IC23	8-759-200-50	s	TC40H374P(TOSHIBA)
IC24	8-759-600-61	s	M54529AP(MITSUBISHI)
L1	1-407-490-00	s	MICRO 680
L2	1-407-490-00	s	MICRO 680
PL1	1-518-386-00	s	5V,30mA "SERVO"
PL2	1-518-386-00	s	5V,30mA "REV"
PL3	1-518-386-00	s	5V,30mA "FWD"
Q1	8-729-602-68	s	2SA1026-8
Q2	8-729-602-68	s	2SA1026-8
Q3	8-729-602-68	s	2SA1026-8
Q4	8-729-602-68	s	2SA1026-8
Q5	8-729-602-68	s	2SA1026-8
Q6	8-729-602-68	s	2SA1026-8
Q7	8-729-602-68	s	2SA1026-8
Q8	8-729-602-68	s	2SA1026-8
Q9	8-729-602-68	s	2SA1026-8
Q10	8-729-602-68	s	2SA1026-8
Q11	8-729-602-68	s	2SA1026-8
Q12	8-729-663-47	s	2SC1364
Q13	8-729-602-68	s	2SA1026-8
Q14	8-729-602-68	s	2SA1026-8
Q15	8-729-602-68	s	2SA1026-8

Ref.No.	Parts No.	SP	Description
Q16	8-729-602-68	s	2SA1026-8
Q17	8-729-602-68	s	2SA1026-8
Q18	8-729-103-43	s	2SB734
Q19	8-729-103-43	s	2SB734
Q20	8-729-103-43	s	2SB734
Q21	8-729-103-43	s	2SB734
Q22	8-729-103-43	s	2SB734
Q23	8-729-103-43	s	2SB734
Q24	8-729-103-43	s	2SB734
Q25	8-729-103-43	s	2SB734
Q26	8-729-602-68	s	2SA1026-8
Q27	8-729-602-68	s	2SA1026-8
Q28	8-729-602-68	s	2SA1026-8
Q29	8-729-602-68	s	2SA1026-8
Q30	8-729-602-68	s	2SA1026-8
Q31	8-729-602-68	s	2SA1026-8
Q32	8-729-602-68	s	2SA1026-8
Q33	8-729-602-68	s	2SA1026-8
Q34	8-729-602-68	s	2SA1026-8
Q35	8-729-602-68	s	2SA1026-8
Q36	8-729-602-68	s	2SA1026-8
Q37	8-729-602-68	s	2SA1026-8
Q38	8-729-602-68	s	2SA1026-8
Q39	8-729-602-68	s	2SA1026-8
Q40	8-729-602-68	s	2SA1026-8
Q41	8-729-602-68	s	2SA1026-8
Q42	8-729-602-68	s	2SA1026-8
Q43	8-729-602-68	s	2SA1026-8
Q44	8-729-602-68	s	2SA1026-8
Q45	8-729-602-68	s	2SA1026-8
Q46	8-729-602-68	s	2SA1026-8
Q47	8-729-602-68	s	2SA1026-8
S1	1-554-708-11	s	KEY,9 SQUARE "ASSEMBLE"
S2	1-554-708-11	s	KEY,9 SQUARE "VIDEO INS"
S3	1-554-708-11	s	KEY,9 SQUARE "AUDIO CH1"
S4	1-554-708-11	s	KEY,9 SQUARE "AUDIO CH2"
S5	1-554-708-11	s	KEY,9 SQUARE "TC REC"
S6	1-554-318-11	s	KEY,12 SQUARE "PREVIEW"
	1-518-450-31	s	PILOT LAMP,5V 60mA
	3-706-480-01	s	KEY TOP (WHITE)
S7	1-554-318-21	s	KEY,12 SQUARE "AUTO EDIT"
	1-518-450-31	s	PILOT LAMP,5V 60mA
	3-706-480-12	s	KEY TOP (RED)
S8	1-554-318-11	s	KEY,12 SQUARE "REVIEW"
	1-518-450-31	s	PILOT LAMP,5V 60mA
	3-706-480-01	s	KEY TOP (WHITE)
S9	1-554-318-11	s	KEY,12 SQUARE "IN POINT"
	1-518-450-31	s	PILOT LAMP,5V 60mA
	3-706-480-01	s	KEY TOP (WHITE)
S10	1-554-318-11	s	KEY,12 SQUARE "OUT POINT"
	1-518-450-31	s	PILOT LAMP,5V 60mA
	3-706-480-01	s	KEY TOP (WHITE)
S11	1-554-318-11	s	KEY,12 SQUARE "STANDBY"
	1-518-450-31	s	PILOT LAMP,5V 60mA
	3-706-480-01	s	KEY TOP (WHITE)
S12	1-554-318-11	s	KEY,12 SQUARE "PREROLL"
	1-518-450-31	s	PILOT LAMP,5V 60mA
	3-706-480-01	s	KEY TOP (WHITE)
S13	1-553-551-21	s	KEY,17 SQUARE "REC"
	1-518-450-21	s	PILOT LAMP,5V 60mA
	3-706-481-11	s	KEY TOP (RED)
S14	1-554-318-11	s	KEY,12 SQUARE "EDIT"
	1-518-450-31	s	PILOT LAMP,5V 60mA
	3-706-480-01	s	KEY TOP (WHITE)
S15	1-554-318-31	s	KEY,12 SQUARE "EJECT"
	1-518-450-31	s	PILOT LAMP,5V 60mA
	3-706-480-22	s	KEY TOP (BLUE)
S16	1-553-551-11	s	KEY,17 SQUARE "REW"
	1-518-450-21	s	PILOT LAMP,5V 60mA
	3-706-481-01	s	KEY TOP (WHITE)
S17	1-553-551-11	s	KEY,17 SQUARE "PLAY"
	1-518-450-21	s	PILOT LAMP,5V 60mA
	3-706-481-01	s	KEY TOP (WHITE)
S18	1-553-551-11	s	KEY,17 SQUARE "FF"
	1-518-450-21	s	PILOT LAMP,5V 60mA
	3-706-481-01	s	KEY TOP (WHITE)
S19	1-553-551-32	s	KEY,17 SQUARE "STOP"
	1-518-450-21	s	PILOT LAMP,5V 60mA
	3-706-481-22	s	KEY TOP (BLUE)
S20	1-554-318-11	s	KEY 12 SQUARE "SEARCH"
	1-518-450-31	s	PILOT LAMP 5V 60mA
	3-706-480-01	s	KEY TOP (WHITE)
S21	1-516-994-00	s	SLIDE "PB/EE"
	KY-47 BOARD		
	1-611-550-00	o	PRINTED CIRCUIT BOARD,KY-47
S22	1-552-539-00	s	KEY "TRIM-"
S23	1-552-539-00	s	KEY "TRIM+"
S24	1-552-539-00	s	KEY "ENTRY"
	PC-9 BOARD		
	1-604-351-00	o	PRINTED CIRCUIT BOARD,PC-9
IC1	8-759-133-90	s	uPC339C(NEC)
IC2	8-719-104-42	s	PS4005-L(NEC)
IC3	8-719-104-42	s	PS4005-L(NEC)
IC4	8-719-104-42	s	PS4005-L(NEC)
	PC-14 BOARD		
	1-604-353-00	o	PRINTED CIRCUIT BOARD,PC-14
IC1	8-719-104-42	s	PS4005-L(NEC)
	PT-9 BOARD		
	1-605-018-00	o	PRINTED CIRCUIT BOARD,PT-9
IC25	8-759-171-05	s	uPC7805H(NEC)

Ref.No.	Parts No.	SP	Description
LE-19 BOARD			
	1-608-053-00	o	PRINTED CIRCUIT BOARD,LE-19
D1	8-719-103-01	s	LED,SE301A
LM-4 BOARD			
	1-585-913-00	o	PRINTED CIRCUIT BOARD,LM-4
L1	1-407-696-00	s	MICRO,18 10%
L2	1-407-696-00	s	MICRO,18 10%
MB-49 BOARD			
	A-6728-920-C	o	MOUNTED CIRCUIT BOARD,MB-49
C101	1-123-299-00	s	ELECT 1000 20% 6.3V
C103	1-123-299-00	s	ELECT 1000 20% 6.3V
CN101	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN102	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN103	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN104	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN105	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN106	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN113	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN114	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN115	1-564-409-11	o	RECEPTACLE,50P
CN116	1-560-191-00	o	RECEPTACLE,40P
CN117	1-560-210-00	o	RECEPTACLE,30P
	1-561-174-00	o	HOUSING,30P
	1-560-768-00	o	CONTACT
	1-560-767-00	o	CONTACT
	1-508-944-00	s	INDEX PIN
CN118	1-564-410-11	s	RECEPTACLE,40P
CN121	1-560-719-00	o	RECEPTACLE,34P
	1-562-420-00	o	HOUSING,34P
	1-560-767-00	o	CONTACT
CN122	1-560-436-00	o	RECEPTACLE,3P
	1-561-218-00	o	HOUSING,3P
	1-561-254-00	o	CONTACT
CN123	1-560-564-00	o	RECEPTACLE,6P
	1-561-219-00	o	HOUSING,6P
	1-561-254-00	o	CONTACT
CN124	1-560-033-00	o	RECEPTACLE,3P
	1-561-218-00	o	HOUSING,3P
	1-561-254-00	o	CONTACT
CN140	1-560-471-00	o	RECEPTACLE,10P
	1-561-589-00	o	HOUSING,10P
	1-561-557-00	o	CONTACT
CN141	1-560-471-00	o	RECEPTACLE,10P
	1-561-589-00	o	HOUSING,10P
	1-561-557-00	o	CONTACT
CN142	1-560-464-00	o	RECEPTACLE,10P
	1-561-589-00	o	HOUSING,10P
	1-561-557-00	o	CONTACT
CN143	1-560-471-00	o	RECEPTACLE,10P
	1-561-589-00	o	HOUSING,10P
	1-561-557-00	o	CONTACT
CN144	1-560-471-00	o	RECEPTACLE,10P
	1-561-589-00	o	HOUSING,10P
	1-561-557-00	o	CONTACT
CN145	1-560-471-00	o	RECEPTACLE,10P
	1-561-589-00	o	HOUSING,10P
	1-561-557-00	o	CONTACT
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
MB-50 BOARD			
	A-6728-921-C	o	MOUNTED CIRCUIT BOARD,MB-50
CN201	1-561-654-00	o	RECEPTACLE,86P,FEMALE
CN202	1-561-654-00	o	RECEPTACLE,86P,FEMALE
CN203	1-561-654-00	o	RECEPTACLE,86P,FEMALE
CN204	1-561-654-00	o	RECEPTACLE,86P,FEMALE
CN205	1-561-654-00	o	RECEPTACLE,86P,FEMALE
CN206	1-560-192-00	o	RECEPTACLE,50P
CN207	1-560-033-00	o	3P
	1-561-218-00	o	RECEPTACLE,3P
	1-561-254-00	o	CONTACT
CN209	1-560-436-00	o	RECEPTACLE,3P
	1-561-218-00	o	HOUSING,3P
	1-561-245-00	o	CONTACT
CN210	1-560-210-00	o	RECEPTACLE,30P
	1-561-174-00	o	HOUSING,30P
	1-560-768-00	o	CONTACT
	1-560-767-00	o	CONTACT
	1-508-944-00	o	INDEX PIN
MB-52 BOARD			
	A-6728-922-A	o	MOUNTED CIRCUIT BOARD,MB-52
CN301	1-561-654-00	o	RECEPTACLE,86P,FEMALE
CN302	1-561-654-00	o	RECEPTACLE,86P,FEMALE
CN303	1-564-409-11	o	RECEPTACLE,50P
CN306	1-560-466-00	o	3P
CN310	1-564-411-11	o	50P

Ref.No.	Parts No.	SP	Description
MB-73 BOARD			
	A-6728-923-A	o	MOUNTED CIRCUIT BOARD,MB-73
C106	1-123-299-00	s	ELECT 1000 20% 6.3V
CN107	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN108	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN109	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN110	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN111	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN112	1-560-919-11	o	RECEPTACLE,60P,FEMALE
CN119	1-564-415-11	o	RECEPTACLE,8P
CN120	1-560-564-00	o	RECEPTACLE,6P
	1-561-219-00	o	HOUSING,6P
	1-561-254-00	o	CONTACT
CN130	1-560-436-00	o	RECEPTACLE,3P
	1-561-218-00	o	HOUSING,3P
	1-561-254-00	o	CONTACT
CN135	1-564-414-11	o	RECEPTACLE,6P
CN137	1-560-471-00	o	RECEPTACLE,10P
	1-561-589-00	o	HOUSING,10P
	1-561-557-00	o	CONTACT
MS-12 BOARD			
	1-609-094-11	o	PRINTED CIRCUIT BOARD,MS-12
PH1	8-719-104-42	s	PS4005-L
MY-17 BOARD			
	A-6711-416-A	o	MOUNTED CIRCUIT BOARD,MY-17
C28	1-107-207-00	s	MICA 16PF 5% 500V
C29	1-107-207-00	s	MICA 16PF 5% 500V
C62	1-102-110-00	s	CERAMIC 220PF 10% 50V
C63	1-102-110-00	s	CERAMIC 220PF 10% 50V
ICA1	8-759-901-64	s	SN74LS164N(TI)
ICB1	8-759-901-64	s	SN74LS164N(TI)
ICC1	8-759-901-64	s	SN74LS164N(TI)
ICD1	8-759-901-66	s	SN74LS166AN(TI)
ICE1	8-759-903-74	s	SN74LS374N(TI)
ICF1	8-759-901-64	s	SN74LS164N(TI)
ICG1	8-759-901-66	s	SN74LS166AN(TI)
ICH1	8-759-901-61	s	SN74LS161AN(TI)
ICJ1	8-759-901-61	s	SN74LS161AN(TI)
ICM1	8-759-974-08	s	SN7408N(TI)
ICA2	8-759-903-74	s	SN74LS374N(TI)
ICB2	8-759-903-74	s	SN74LS374N(TI)
ICC2	8-759-901-64	s	SN74LS164N(TI)
ICD2	8-759-901-28	s	MSM5128-12RS(OKI)
ICE2	8-759-901-64	s	SN74LS164N(TI)
ICF2	8-759-901-66	s	SN74LS166AN(TI)
ICG2	8-759-901-28	s	MSM5128-12RS(OKI)
ICH2	8-759-901-57	s	SN74LS157N(TI)
ICJ2	8-759-901-61	s	SN74LS161AN(TI)
ICK2	8-759-901-61	s	SN74LS161AN(TI)
ICL2	8-759-902-21	s	SN74LS221N(TI)
ICM2	8-759-901-64	s	SN74LS164N(TI)
ICN2	8-759-901-64	s	SN74LS164N(TI)
ICA3	8-759-901-66	s	SN74LS166AN(TI)
ICB3	8-759-901-66	s	SN74LS166AN(TI)
ICC3	8-759-901-64	s	SN74LS164N(TI)
ICE3	8-759-901-64	s	SN74LS164N(TI)
ICF3	8-759-903-74	s	SN74LS374N(TI)
ICH3	8-759-901-57	s	SN74LS157N(TI)
ICJ3	8-759-901-75	s	SN74LS175N(TI)
ICK3	8-759-901-75	s	SN74LS175N(TI)
ICL3	8-759-901-61	s	SN74LS161AN(TI)
ICM3	8-759-900-74	s	SN74LS74AN(TI)
ICN3	8-759-900-74	s	SN74LS74AN(TI)
ICA4	8-759-901-66	s	SN74LS166AN(TI)
ICB4	8-759-901-66	s	SN74LS166AN(TI)
ICC4	8-759-903-74	s	SN74LS374N(TI)
ICD4	8-759-901-28	s	MSM5128-12RS(OKI)
ICE4	8-759-903-74	s	SN74LS374N(TI)
ICF4	8-759-901-66	s	SN74LS166AN(TI)
ICG4	8-759-901-28	s	MSM5128-12RS(OKI)
ICH4	8-759-901-57	s	SN74LS157N(TI)
ICJ4	8-759-901-75	s	SN74LS175N(TI)
ICK4	8-759-901-63	s	SN74LS163AN(TI)
ICL4	8-759-901-51	s	SN74LS151N(TI)
ICM4	8-759-900-30	s	SN74LS30N(TI)
ICN4	8-759-900-74	s	SN74LS74AN(TI)
ICA5	8-759-901-66	s	SN74LS166AN(TI)
ICB5	8-759-901-66	s	SN74LS166AN(TI)
ICC5	8-759-903-74	s	SN74LS374N(TI)
ICD5	8-759-901-28	s	MSM5128-12RS(OKI)
ICE5	8-759-901-64	s	SN74LS164N(TI)
ICF5	8-759-903-74	s	SN74LS374N(TI)
ICG5	8-759-901-28	s	MSM5128-12RS(OKI)
ICH5	8-759-901-57	s	SN74LS157N(TI)
ICJ5	8-759-901-63	s	SN74LS163AN(TI)
ICK5	8-759-900-85	s	SN74LS85N(TI)
ICL5	8-759-903-93	s	SN74LS393N(TI)
ICM5	8-759-900-04	s	SN74LS04N(TI)
ICN5	8-759-900-04	s	SN74LS04N(TI)
ICA6	8-759-901-66	s	SN74LS166AN(TI)
ICB6	8-759-901-66	s	SN74LS166AN(TI)
ICC6	8-759-901-64	s	SN74LS164N(TI)
ICE6	8-759-901-64	s	SN74LS164N(TI)
ICF6	8-759-901-64	s	SN74LS164N(TI)
ICH6	8-759-901-61	s	SN74LS161AN(TI)
ICJ6	8-759-901-61	s	SN74LS161AN(TI)
ICK6	8-759-901-91	s	SN74LS191N(TI)
ICL6	8-759-900-00	s	SN74LS00N(TI)
ICM6	8-759-900-74	s	SN74LS74AN(TI)
ICP6	8-759-900-00	s	SN74LS00N(TI)
ICA7	8-759-901-66	s	SN74LS166AN(TI)
ICB7	8-759-901-66	s	SN74LS166AN(TI)
ICC7	8-759-901-64	s	SN74LS164N(TI)
ICD7	8-759-901-28	s	MSM5128-12RS(OKI)

Ref.No.	Parts No.	SP	Description
ICE7	8-759-901-66	s	SN74LS166AN(TI)
ICF7	8-759-901-66	s	SN74LS166AN(TI)
ICG7	8-759-901-28	s	MSM5128-12RS(OKI)
ICH7	8-759-901-57	s	SN74LS157N(TI)
ICJ7	8-759-901-57	s	SN74LS157N(TI)
ICK7	8-759-901-61	s	SN74LS161AN(TI)
ICL7	8-759-900-08	s	SN74LS08N(TI)
ICM7	8-759-902-21	s	SN74LS221N(TI)
ICN7	8-759-901-23	s	SN74LS123N(TI)
ICP7	8-759-901-64	s	SN74LS164N(TI)
ICA8	8-759-901-66	s	SN74LS166AN(TI)
ICB8	8-759-901-66	s	SN74LS166AN(TI)
ICC8	8-759-903-74	s	SN74LS374N(TI)
ICE8	8-759-903-74	s	SN74LS374N(TI)
ICF8	8-759-901-64	s	SN74LS164N(TI)
ICH8	8-759-901-57	s	SN74LS157N(TI)
ICJ8	8-759-901-57	s	SN74LS157N(TI)
ICK8	8-759-901-61	s	SN74LS161AN(TI)
ICL8	8-759-901-91	s	SN74LS191N(TI)
ICM8	8-759-900-00	s	SN74LS00N(TI)
ICN8	8-759-974-04	s	SN7404N(TI)
ICP8	8-759-974-04	s	SN7404N(TI)
ICA9	8-759-901-66	s	SN74LS166AN(TI)
ICB9	8-759-901-66	s	SN74LS166AN(TI)
ICC9	8-759-901-64	s	SN74LS164N(TI)
ICD9	8-759-901-28	s	MSM5128-12RS(OKI)
ICE9	8-759-901-66	s	SN74LS166AN(TI)
ICF9	8-759-901-64	s	SN74LS164N(TI)
ICG9	8-759-901-28	s	MSM5128-12RS(OKI)
ICH9	8-759-901-63	s	SN74LS163AN(TI)
ICJ9	8-759-904-96	s	MBM2149L-55(FUJITSU)
ICK9	8-759-901-23	s	SN74LS123N(TI)
ICL9	8-759-901-61	s	SN74LS161AN(TI)
ICM9	8-759-900-04	s	SN74LS04N(TI)
ICN9	8-759-901-61	s	SN74LS161AN(TI)
ICP9	8-759-900-00	s	SN74LS00N(TI)
ICA10	8-759-901-66	s	SN74LS166AN(TI)
ICB10	8-759-901-66	s	SN74LS166AN(TI)
ICC10	8-759-903-74	s	SN74LS374N(TI)
ICD10	8-759-901-28	s	MSM5128-12RS(OKI)
ICE10	8-759-901-66	s	SN74LS166AN(TI)
ICF10	8-759-903-74	s	SN74LS374N(TI)
ICG10	8-759-901-28	s	MSM5128-12RS(OKI)
ICH10	8-759-901-63	s	SN74LS163AN(TI)
ICJ10	8-759-904-96	s	MBM2149L-55(FUJITSU)
ICL10	8-759-900-74	s	SN74LS74AN(TI)
ICM10	8-759-914-00	s	SN7400N(TI)
ICN10	8-759-901-61	s	SN74LS161AN(TI)
ICP10	8-759-901-61	s	SN74LS161AN(TI)
ICA11	8-759-901-66	s	SN74LS166AN(TI)
ICB11	8-759-901-66	s	SN74LS166AN(TI)
ICC11	8-759-903-74	s	SN74LS374N(TI)
ICE11	8-759-903-74	s	SN74LS374N(TI)
ICF11	8-759-903-74	s	SN74LS374N(TI)
ICH11	8-759-901-63	s	SN74LS163AN(TI)
ICJ11	8-759-903-74	s	SN74LS374N(TI)
ICK11	8-759-900-02	s	SN74LS02N(TI)
ICL11	8-759-903-74	s	SN74LS374N(TI)
ICM11	8-759-903-74	s	SN74LS374N(TI)
ICN11	8-759-900-04	s	SN74LS04N(TI)

Ref.No.	Parts No.	SP	Description
ICA12	8-759-903-74	s	SN74LS374N(TI)
ICB12	8-759-903-74	s	SN74LS374N(TI)
ICC12	8-759-901-64	s	SN74LS164N(TI)
ICD12	8-759-901-28	s	MSM5128-12RS(OKI)
ICE12	8-759-942-73	s	SN74273N(TI)
ICF12	8-759-900-04	s	SN74LS04N(TI)
ICG12	8-759-901-64	s	SN74LS164N(TI)
ICH12	8-759-974-04	s	SN7404N(TI)
ICJ12	8-759-900-74	s	SN74LS74AN(TI)
ICK12	8-759-900-04	s	SN74LS04N(TI)
ICN12	8-759-900-04	s	SN74LS04N(TI)
L1	1-421-329-00	s	5.6
RB1	1-231-450-00	s	3.3KX8
RB2	1-231-450-00	s	3.3KX8

PC-17 BOARD

	1-608-070-00	o	PRINTED CIRCUIT BOARD,PC-17
PH1	8-719-104-42	s	PS4005-L(NEC)

PC-18 BOARD

	1-608-071-00	o	PRINTED CIRCUIT BOARD,PC-18
PH1	8-719-104-42	s	PS4005-L(NEC)

PD-22 BOARD

	1-611-993-11	o	PRINTED CIRCUIT BOARD,PD-22

PH-16 BOARD

	1-608-054-00	o	PRINTED CIRCUIT BOARD,PH-16
Q1	8-729-206-01	s	PHOTO,TPS601

Ref.No.	Parts No.	SP	Description
PR-48 BOARD			
	A-6711-525-A	o	MOUNTED CIRCUIT BOARD,PR-48
C7	1-109-530-00	s	MICA 62PF 5% 100V
C22	1-107-206-00	s	MICA 15PF 5% 500V
C40	1-107-048-00	s	MICA 6.8PF 500V
C62	1-109-530-00	s	MICA 62PF 5% 100V
C74	1-107-087-00	s	MICA 120PF 5% 50V
C85	1-109-535-00	s	MICA 100PF 5% 100V
C94	1-107-048-00	s	MICA 6.8PF 500V
C100	1-109-527-00	s	MICA 47PF 5% 100V
C101	1-109-542-00	s	MICA 220PF 5% 100V
C106	1-109-527-00	s	MICA 47PF 5% 100V
C107	1-109-542-00	s	MICA 220PF 5% 100V
C115	1-109-525-00	s	MICA 39PF 5% 100V
C118	1-107-159-00	s	MICA 33PF 5% 500V
C119	1-109-527-00	s	MICA 47PF 5% 100V
C128	1-109-548-00	s	MICA 360PF 5% 100V
C142	1-109-553-00	s	MICA 470PF 5% 100V
C145	1-109-547-00	s	MICA 330PF 5% 100V
C147	1-109-535-00	s	MICA 100PF 5% 100V
C148	1-109-547-00	s	MICA 330PF 5% 100V
C160	1-109-548-00	s	MICA 360PF 5% 100V
C165	1-109-537-00	s	MICA 120PF 5% 100V
C167	1-109-535-00	s	MICA 100PF 5% 100V
C168	1-109-548-00	s	MICA 360PF 5% 100V
C170	1-109-533-00	s	MICA 82PF 5% 100V
C176	1-109-530-00	s	MICA 62PF 5% 100V
C178	1-107-202-00	s	MICA 10PF 5% 500V
C181	1-109-530-00	s	MICA 62PF 5% 100V
C186	1-109-530-00	s	MICA 62PF 5% 100V
C208	1-107-211-00	s	MICA 24PF 5% 500V
C209	1-107-211-00	s	MICA 24PF 5% 500V
C210	1-107-211-00	s	MICA 24PF 5% 500V
C211	1-107-211-00	s	MICA 24PF 5% 500V
C212	1-107-211-00	s	MICA 24PF 5% 500V
C213	1-107-211-00	s	MICA 24PF 5% 500V
C214	1-107-211-00	s	MICA 24PF 5% 500V
C215	1-107-211-00	s	MICA 24PF 5% 500V
C217	1-107-211-00	s	MICA 24PF 5% 500V
C219	1-107-211-00	s	MICA 24PF 5% 500V
C220	1-107-211-00	s	MICA 24PF 5% 500V
C221	1-107-211-00	s	MICA 24PF 5% 500V
C222	1-107-211-00	s	MICA 24PF 5% 500V
C223	1-107-211-00	s	MICA 24PF 5% 500V
C224	1-107-211-00	s	MICA 24PF 5% 500V
C225	1-107-211-00	s	MICA 24PF 5% 500V
C226	1-107-211-00	s	MICA 24PF 5% 500V
C231	1-107-211-00	s	MICA 24PF 5% 500V
C232	1-107-211-00	s	MICA 24PF 5% 500V
C233	1-107-211-00	s	MICA 24PF 5% 500V
C234	1-107-211-00	s	MICA 24PF 5% 500V
C235	1-107-211-00	s	MICA 24PF 5% 500V
C236	1-107-211-00	s	MICA 24PF 5% 500V
C237	1-107-211-00	s	MICA 24PF 5% 500V
C238	1-107-211-00	s	MICA 24PF 5% 500V
C239	1-107-211-00	s	MICA 24PF 5% 500V
C248	1-107-048-00	s	MICA 6.8PF 500V
C249	1-107-211-00	s	MICA 24PF 5% 500V
C252	1-107-048-00	s	MICA 6.8PF 500V
C501	1-109-556-00	s	MICA 620PF 5% 100V
C504	1-107-202-00	s	MICA 10PF 5% 500V
D1	8-719-815-55	s	1S1555
D2	8-719-101-97	s	1SS97-1
D3	8-719-101-97	s	1SS97-1
D4	8-719-101-97	s	1SS97-1
D5	8-719-101-97	s	1SS97-1
D6	8-719-815-80	s	1S1587
D7	8-719-815-80	s	1S1587
D8	8-719-102-51	s	1SZ51
D9	8-719-815-55	s	1S1555
D10	8-719-101-97	s	1SS97-1
D11	8-719-101-97	s	1SS97-1
D13	8-719-101-97	s	1SS97-1
D14	8-719-101-97	s	1SS97-1
D15	8-719-815-80	s	1S1587
D16	8-719-815-80	s	1S1587
D17	8-719-815-55	s	1S1555
D18	8-719-815-55	s	1S1555
D19	8-719-127-07	s	RD2.7E
D20	8-719-815-55	s	1S1555
D21	8-719-815-55	s	1S1555
D22	8-719-815-55	s	1S1555
D23	8-719-815-55	s	1S1555
D24	8-719-815-55	s	1S1555
D25	8-719-815-55	s	1S1555
D26	8-719-815-55	s	1S1555
D27	8-719-100-58	s	RD10EB3
D28	8-719-815-55	s	1S1555
DL1	1-415-168-00	s	20ns x10
DL2	1-415-173-00	s	5ns x10
DL3	1-415-173-00	s	5ns x10
DL4	1-415-308-00	s	700ns
FB1	1-535-178-00	s	
FB2	1-535-178-00	s	
FB3	1-535-178-00	s	
FB4	1-535-178-00	s	
HCR1	1-232-987-11	s	
HCR2	1-232-987-11	s	
HCR3	1-232-987-11	s	
IC1	8-749-936-51	s	BX365A(SONY)
IC2	8-759-900-59	s	HI1-201-5(HARRIS)
IC3	8-759-990-82	s	TL082CP(TI)
IC4	8-752-005-21	s	CX20052A(SONY)
IC5	8-759-301-05	s	HD10105(HITACHI)
IC7	8-759-300-25	s	HD10125(HITACHI)
IC8	8-759-300-25	s	HD10125(HITACHI)
IC9	8-759-145-57	s	uPC4557C(NEC)
IC10	8-749-936-51	s	BX365A(SONY)
IC11	8-759-990-82	s	TL082CP(TI)
IC12	8-759-900-59	s	HI1-201-5(HARRIS)
IC13	8-759-990-82	s	TL082CP(TI)
IC14	8-752-005-21	s	CX20052A(SONY)
IC15	8-759-301-05	s	HD10105(HITACHI)
IC17	8-759-300-25	s	HD10125(HITACHI)

Ref.No.	Parts No.	SP	Description
IC18	8-759-300-25	s	HD10125(HITACHI)
IC19	8-749-936-51	s	BX365A(SONY)
IC20	8-759-103-19	s	uPC319C(NEC)
IC21	8-749-936-51	s	BX365A(SONY)
IC22	8-759-103-19	s	uPC319C(NEC)
IC23	8-759-900-58	s	HA1-4905-5(HARRIS)
IC24	8-759-990-84	s	TL084CN(TI)
IC25	8-759-900-59	s	HI1-201-5(HARRIS)
IC26	8-759-901-23	s	SN74LS123N(TI)
IC27	8-759-900-59	s	HI1-201-5(HARRIS)
IC28	8-759-902-21	s	SN74LS221N(TI)
IC29	8-759-954-54	s	SN75454BP(TI)
IC30	8-759-900-58	s	HA1-4905-5(HARRIS)
IC31	8-759-990-84	s	TL084CN(TI)
IC32	8-759-900-58	s	HA1-4905-5(HARRIS)
IC33	8-759-900-59	s	HI1-201-5(HARRIS)
IC34	8-759-900-00	s	SN74LS00N(TI)
IC35	8-759-900-74	s	SN74LS74AN(TI)
IC36	8-759-902-21	s	SN74LS221N(TI)
IC37	8-759-900-20	s	SN74LS20N(TI)
IC38	8-759-245-28	s	TC4528BP(TOSHIBA)
IC39	8-759-902-21	s	SN74LS221N(TI)
IC40	8-759-240-22	s	TC4022BP(TOSHIBA)
IC41	8-749-936-51	s	BX365A(SONY)
IC42	8-749-936-51	s	BX365A(SONY)
IC43	8-749-936-51	s	BX365A(SONY)
IC44	8-752-005-11	s	CX20051A(SONY)
IC45	8-752-005-11	s	CX20051A(SONY)
IC46	8-752-005-11	s	CX20051A(SONY)
IC47	8-759-145-57	s	uPC4557C(NEC)
IC48	8-759-990-82	s	TL082CP(TI)
IC49	8-759-906-07	s	TL607CP(TI)
IC50	8-759-906-07	s	TL607CP(TI)
IC51	8-759-990-82	s	TL082CP(TI)
IC52	8-759-145-57	s	uPC4557C(NEC)
IC53	8-759-001-98	s	MC10198L(MOTOROLA)
IC54	8-759-910-32	s	SN74S32N(TI)
IC55	8-759-901-63	s	SN74LS163AN(TI)
IC56	8-759-942-73	s	SN74273N(TI)
IC57	8-759-904-96	s	MBM2149L-55(FUJITSU)
IC58	8-759-904-96	s	MBM2149L-55(FUJITSU)
IC59	8-759-904-96	s	MBM2149L-55(FUJITSU)
IC60	8-759-904-96	s	MBM2149L-55(FUJITSU)
IC61	8-759-942-73	s	SN74273N(TI)
IC62	8-759-900-04	s	SN74LS04N(TI)
IC63	8-759-900-13	s	SN74LS113AN(TI)
IC64	8-759-903-74	s	SN74LS374N(TI)
IC65	8-759-901-63	s	SN74LS163AN(TI)
IC66	8-759-902-73	s	SN74LS273N(TI)
IC67	8-759-902-73	s	SN74LS273N(TI)
IC68	8-759-902-73	s	SN74LS273N(TI)
IC69	8-759-903-74	s	SN74LS374N(TI)
IC501	8-749-936-51	s	BX365A(SONY)

Ref.No.	Parts No.	SP	Description
L1	1-421-329-00	s	5.6
L2	1-421-329-00	s	5.6
L7	1-421-329-00	s	5.6
L8	1-421-329-00	s	5.6
LPF1	1-235-177-00	s	LPF
LPF2	1-235-177-00	s	LPF
LPF3	1-235-178-00	s	LPF
LPF4	1-235-179-00	s	LPF
LPF5	1-235-179-00	s	LPF
Q1	8-729-672-43	s	2SC2724
Q2	8-729-368-90	s	2SC689H
Q3	8-729-672-43	s	2SC2724
Q4	8-769-193-09	s	2SK43-3
Q5	8-769-193-09	s	2SK43-3
Q6	8-729-353-00	s	2SA530H
Q7	8-729-368-90	s	2SC689H
Q8	8-729-368-90	s	2SC689H
Q9	8-729-100-87	s	2SC1275
Q10	8-729-100-87	s	2SC1275
Q11	8-729-672-43	s	2SC2724
Q12	8-729-113-32	s	2SB733
Q13	8-729-368-90	s	2SC689H
Q14	8-729-672-43	s	2SC2724
Q15	8-769-193-09	s	2SK43-3
Q16	8-769-193-09	s	2SK43-3
Q17	8-729-353-00	s	2SA530H
Q18	8-729-368-90	s	2SC689H
Q19	8-729-368-90	s	2SC689H
Q20	8-729-100-87	s	2SC1275
Q21	8-729-100-87	s	2SC1275
Q22	8-729-672-43	s	2SC2724
Q23	8-729-672-43	s	2SC2724
Q24	8-729-612-77	s	2SA1027R
Q25	8-729-672-43	s	2SC2724
Q26	8-729-672-43	s	2SC2724
Q27	8-729-612-77	s	2SA1027R
Q28	8-729-110-53	s	2SA1005
Q29	8-729-110-53	s	2SA1005
Q30	8-729-110-53	s	2SA1005
Q501	8-724-375-01	s	2SC403C
RB1	1-231-502-00	s	510x4
RB2	1-231-405-00	s	1Kx8
RB3	1-231-502-00	s	510x4
RB4	1-231-405-00	s	1Kx8
RB5	1-235-128-00	s	1.5Kx8
RB6	1-231-450-00	s	3.3Kx8
RB7	1-235-128-00	s	1.5Kx8
RB8	1-231-450-00	s	3.3Kx8
RB9	1-235-128-00	s	1.5Kx8
RB10	1-231-450-00	s	3.3Kx8
RB11	1-231-450-00	s	3.3Kx8
RB12	1-231-450-00	s	3.3Kx8
RB13	1-231-521-00	s	3.3Kx4

Ref.No.	Parts No.	SP	Description
RV1	1-230-840-11	s	VAR,CERMET 1K
RV2	1-230-844-11	s	VAR,CERMET 20K
RV3	1-230-840-11	s	VAR,CERMET 1K
RV4	1-230-840-11	s	VAR,CERMET 1K
RV5	1-230-844-11	s	VAR,CERMET 20K
RV6	1-230-844-11	s	VAR,CERMET 20K
RV7	1-230-844-11	s	VAR,CERMET 20K
RV8	1-230-841-11	s	VAR,CERMET 2K
RV9	1-230-843-11	s	VAR,CERMET 10K
RV10	1-230-841-11	s	VAR,CERMET 2K
T1	1-446-330-00	s	PULSE
T2	1-446-330-00	s	PULSE

RD-2 BOARD

	A-6715-212-A	o	MOUNTED CIRCUIT BOARD,RD-2
D1	8-719-200-02	s	10E-2
D2	8-719-200-02	s	10E-2
Q1	8-729-177-43	s	2SD774
Q2	8-729-313-42	s	2SD1134
Q3	8-729-313-42	s	2SD1134
Q4	8-729-374-02	s	2SB740
Q5	8-729-313-42	s	2SD1134
Q6	8-729-177-43	s	2SD774
Q7	8-729-313-42	s	2SD1134
Q8	8-729-313-42	s	2SD1134
Q9	8-729-374-02	s	2SB740
Q10	8-729-313-42	s	2SD1134
R4	1-217-059-00	s	WIREWOUND 2.7 10% 6W
R5	1-207-620-00	s	WIREWOUND 1 10% 3W
R6	1-207-679-00	s	WIREWOUND 15 10% 6W
R10	1-207-620-00	s	WIREWOUND 1 10% 3W

RE-10 BOARD

	A-6711-495-B	o	MOUNTED CIRCUIT BOARD,RE-10
C5	1-102-116-00	s	CERAMIC 680PF 10% 50V
C7	1-161-484-00	s	CERAMIC 0.15 10% 50V
C15	1-102-116-00	s	CERAMIC 680PF 10% 50V
C17	1-161-484-00	s	CERAMIC 0.15 10% 50V
CN1	1-560-462-00	o	RECEPTACLE,6P
	1-561-587-00	o	HOUSING,6P
	1-561-557-00	o	CONTACT
CN2	1-560-461-00	o	RECEPTACLE,5P
	1-561-586-00	o	HOUSING,5P
	1-561-557-00	o	CONTACT
LV1	1-407-565-00	s	VAR,2.2
LV2	1-407-565-00	s	VAR,2.2

Ref.No.	Parts No.	SP	Description
Q1	8-729-117-54	s	2SA1175
Q2	8-729-177-32	s	2SD773
Q3	8-729-177-32	s	2SD773
Q4	8-729-663-47	s	2SC1364
Q5	8-729-117-54	s	2SA1175
Q6	8-729-177-32	s	2SD773
Q7	8-729-177-32	s	2SD773
Q8	8-729-663-47	s	2SC1364
RV1	1-228-303-00	s	VAR,CERMET 200
RV2	1-228-303-00	s	VAR,CERMET 200
T1	1-433-194-00	s	15.5MHz
T2	1-433-194-00	s	15.5MHz

RM-24 BOARD

	1-611-541-12	o	PRINTED CIRCUIT BOARD,RM-24
CN1	1-561-028-00	s	RECEPTACLE,36P "REMOTE-2"
CN2	1-561-655-00	s	RECEPTACLE,9P "REMOTE-1"
CN3	1-557-233-11	o	FLAT CABLE ASS'Y,40P
D1	8-719-200-02	s	10E-2
D2	8-719-200-02	s	10E-2

RP-15 BOARD

	A-6711-515-B	o	MOUNTED CIRCUIT BOARD,RP-15
C107	1-123-821-00	s	ELECT 47 20% 16V
C111	1-123-821-00	s	ELECT 47 20% 16V
C116	1-123-821-00	s	ELECT 47 20% 16V
C119	1-123-821-00	s	ELECT 47 20% 16V
C207	1-123-821-00	s	ELECT 47 20% 16V
C211	1-123-821-00	s	ELECT 47 20% 16V
C216	1-123-821-00	s	ELECT 47 20% 16V
C219	1-123-821-00	s	ELECT 47 20% 16V
CN703	1-560-467-00	o	RECEPTACLE,4P
	1-561-585-00	o	HOUSING,4P
	1-561-557-00	o	CONTACT
CN704	1-560-469-00	o	RECEPTACLE,6P
	1-561-587-00	o	HOUSING,6P
	1-561-557-00	o	CONTACT
CN705	1-560-468-00	o	RECEPTACLE,5P
	1-561-586-00	o	HOUSING,5P
	1-561-557-00	o	CONTACT
CN706	1-560-467-00	o	RECEPTACLE,4P
	1-561-585-00	o	HOUSING,4P
	1-561-557-00	o	CONTACT

Ref.No.	Parts No.	SP	Description
D101	8-719-815-59	s	1S1555-S
D102	8-719-127-07	s	RD2.7E
D103	8-719-815-55	s	1S1555
D104	8-719-815-55	s	1S1555
D105	8-719-104-10	s	1SS99
D106	8-719-104-10	s	1SS99
D201	8-719-815-59	s	1S1555-S
D202	8-719-127-07	s	RD2.7E
D203	8-719-815-55	s	1S1555
D204	8-719-815-55	s	1S1555
D205	8-719-104-10	s	1SS99
D206	8-719-104-10	s	1SS99
IC101	8-743-731-00	s	BX373A(SONY)
IC102	8-759-240-09	s	TC4009UBP(TOSHIBA)
IC103	8-741-126-50	s	BX1265(SONY)
IC104	8-741-126-50	s	BX1265(SONY)
IC107	8-729-677-14	s	TRANSISTOR 2SC2771
IC108	8-729-677-14	s	TRANSISTOR 2SC2771
IC109	8-752-006-10	s	CX20061(SONY)
IC110	8-752-006-10	s	CX20061(SONY)
IC201	8-743-731-00	s	BX373A(SONY)
IC202	8-759-240-09	s	TC4009UBP(TOSHIBA)
IC203	8-741-126-50	s	BX1265(SONY)
IC204	8-741-126-50	s	BX1265(SONY)
IC207	8-729-677-14	s	TRANSISTOR 2SC2771
IC208	8-729-677-14	s	TRANSISTOR 2SC2771
IC209	8-752-006-10	s	CX20061(SONY)
IC210	8-752-006-10	s	CX20061(SONY)
Q103	8-729-201-05	s	2SC2878-B
Q106	8-729-201-05	s	2SC2878-B
Q203	8-729-201-05	s	2SC2878-B
Q206	8-729-201-05	s	2SC2878-B
RV102	1-226-770-00	s	VAR,METAL 470
RV103	1-226-772-00	s	VAR,METAL 4.7K
RV104	1-226-702-00	s	VAR,METAL 2.2K
RV105	1-226-772-00	s	VAR,METAL 4.7K
RV106	1-226-702-00	s	VAR,METAL 2.2K
RV107	1-226-769-00	s	VAR,METAL 100
RV110	1-226-769-00	s	VAR,METAL 100
RV202	1-226-770-00	s	VAR,METAL 470
RV203	1-226-772-00	s	VAR,METAL 4.7K
RV204	1-226-702-00	s	VAR,METAL 2.2K
RV205	1-226-772-00	s	VAR,METAL 4.7K
RV206	1-226-702-00	s	VAR,METAL 2.2K
RV207	1-226-769-00	s	VAR,METAL 100
RV210	1-226-769-00	s	VAR,METAL 100
T101	1-426-017-00	s	AF
T102	1-426-066-00	s	RF
T103	1-426-018-00	s	AF
T104	1-426-066-00	s	RF
T105	1-426-018-00	s	AF
T201	1-426-017-00	s	AF
T202	1-426-066-00	s	RF
T203	1-426-018-00	s	AF
T204	1-426-066-00	s	RF
T205	1-426-018-00	s	AF

Ref.No.	Parts No.	SP	Description
SD-6 BOARD			
	A-6711-529-A	o	MOUNTED CIRCUIT BOARD,SD-6
C1	1-123-821-00	s	ELECT 47 20% 16V
C3	1-123-821-00	s	ELECT 47 20% 16V
C6	1-123-620-00	s	ELECT 10 20% 25V
C9	1-107-159-00	s	MICA 33PF 5% 500V
C28	1-109-542-00	s	MICA 220PF 5% 100V
C30	1-123-645-00	s	ELECT 33 20% 10V
C31	1-123-645-00	s	ELECT 33 20% 10V
C33	1-123-821-00	s	ELECT 47 20% 16V
C35	1-123-821-00	s	ELECT 47 20% 16V
C38	1-107-208-00	s	MICA 18PF 5% 500V
C39	1-131-404-00	s	ELECT 0.22 10% 25V
C40	1-131-404-00	s	ELECT 0.22 10% 25V
C45	1-131-341-00	s	ELECT 0.1 10% 25V
C47	1-123-821-00	s	ELECT 47 20% 16V
C50	1-107-210-00	s	MICA 22PF 5% 500V
C52	1-123-617-00	s	ELECT 10 20% 16V
C55	1-107-158-00	s	MICA 30PF 5% 500V
C56	1-109-541-00	s	MICA 200PF 5% 100V
C63	1-107-210-00	s	MICA 22PF 5% 500V
C64	1-123-821-00	s	ELECT 47 20% 16V
C66	1-123-821-00	s	ELECT 47 20% 16V
C68	1-123-821-00	s	ELECT 47 20% 16V
C69	1-107-209-00	s	MICA 20PF 5% 500V
C72	1-123-821-00	s	ELECT 47 20% 16V
C74	1-123-821-00	s	ELECT 47 20% 16V
C76	1-123-821-00	s	ELECT 47 20% 16V
C79	1-123-821-00	s	ELECT 47 20% 16V
C82	1-123-821-00	s	ELECT 47 20% 16V
C85	1-123-821-00	s	ELECT 47 20% 16V
C87	1-123-821-00	s	ELECT 47 20% 16V
C90	1-123-821-00	s	ELECT 47 20% 16V
C201	1-107-208-00	s	MICA 18PF 5% 500V
C204	1-123-644-00	s	ELECT 22 20% 10V
D1	8-719-911-19	s	1SS119
D2	8-719-162-07	s	RD6.2E-B
D3	8-719-911-19	s	1SS119
D4	8-719-815-80	s	1S1587
D5	8-719-911-19	s	1SS119
D6	8-719-911-19	s	1SS119
D9	8-719-911-19	s	1SS119
D10	8-719-911-19	s	1SS119
D11	8-719-911-19	s	1SS119
D12	8-719-911-19	s	1SS119
D13	8-719-911-19	s	1SS119
D14	8-719-911-19	s	1SS119
D15	8-719-911-19	s	1SS119

Ref.No.	Parts No.	SP	Description
IC1	8-759-952-07	s	SN75207BN(TI)
IC2	8-759-103-19	s	uPC319C(NEC)
IC3	8-757-903-00	s	CX7903(SONY)
IC4	1-527-729-00	s	VCO,14.1875MHz
IC5	8-757-731-00	s	CX773A(SONY)
IC6	1-527-585-00	s	VCO,17.734475MHz
IC7	8-759-240-53	s	TC4053BP(TOSHIBA)
IC8	8-759-902-21	s	SN74LS221N(TI)
IC9	8-750-000-74	s	CX20061(SONY)
IC10	8-759-220-00	s	TC40H000P(TOSHIBA)
IC11	8-759-240-53	s	TC4053BP(TOSHIBA)
IC12	8-759-900-86	s	SN74LS86N(TI)
IC13	8-759-901-23	s	SN74LS123N(TI)
IC14	8-759-990-62	s	TL062CP(TI)
IC15	8-759-907-93	s	uA796HC-B(FSC)
IC17	8-749-936-61	s	BX366A(SONY)
IC18	8-759-900-32	s	SN74LS32N(TI)
IC19	8-749-936-61	s	BX366A(SONY)
IC20	8-759-990-62	s	TL062CP(TI)
IC21	8-759-240-01	s	TC4001BP(TOSHIBA)
IC22	8-759-220-00	s	TC40H000P(TOSHIBA)
L22	1-421-329-00	s	10
L23	1-421-329-00	s	10
L24	1-421-329-00	s	10
L25	1-421-329-00	s	10
Q1	8-729-603-50	s	2SC403C
Q2	8-729-603-50	s	2SC403C
Q3	8-729-603-50	s	2SC403C
Q4	8-729-672-43	s	2SC2724
Q5	8-729-612-77	s	2SA1027R
Q6	8-729-612-77	s	2SA1027R
Q8	8-724-375-01	s	2SC403C
Q9	8-729-603-50	s	2SC403C
Q10	8-729-663-47	s	2SC1364
Q11	8-729-603-50	s	2SC403C
Q13	8-729-612-77	s	2SA1027R
Q14	8-729-603-50	s	2SC403C
Q15	8-729-603-50	s	2SC403C
Q17	8-729-603-50	s	2SC403C
Q18	8-729-603-50	s	2SC403C
Q19	8-729-603-50	s	2SC403C
Q20	8-729-603-50	s	2SC403
Q201	8-729-602-67	s	2SA1026-7
Q202	8-724-375-01	s	2SC403C
Q203	8-724-375-01	s	2SC403C
RV1	1-228-458-00	s	VAR,CERMET 5K
RV2	1-228-459-00	s	VAR,CERMET 10K
RV5	1-228-459-00	s	VAR,CERMET 10K
RV6	1-228-455-00	s	VAR,CERMET 500
RV7	1-228-459-00	s	VAR,CERMET 10K
RV8	1-228-460-00	s	VAR,CERMET 20K
RV9	1-228-460-00	s	VAR,CERMET 20K
RV201	1-228-455-00	s	VAR,CERAMIT 500
RV202	1-228-456-00	s	VAR,CERAMIT 1K

Ref.No.	Parts No.	SP	Description
SS-8 BOARD			
	1-586-946-00	o	PRINTED CIRCUIT BOARD,SS-8
L1	1-459-051-00	s	HEAD,SENSING

Ref.No.	Parts No.	SP	Description
SV-55 BOARD			
	A-6715-225-A	o	MOUNTED CIRCUIT BOARD,SV-55
C3	1-107-177-00	s	MICA 220PF 5% 500V
C10	1-102-114-00	s	CERAMIC 470PF 10% 50V
C18	1-131-404-00	s	ELECT 0.22 10% 25V
C38	1-130-224-00	s	FILM 0.015 5% 50V
C40	1-131-341-00	s	ELECT 0.1 10% 25V
C41	1-123-299-00	s	ELECT 1000 20% 6.3V
C51	1-102-114-00	s	CERAMIC 470PF 10% 50V
C63	1-107-177-00	s	MICA 220PF 5% 500V
C68	1-131-341-00	s	ELECT 0.1 10% 25V
C81	1-131-341-00	s	ELECT 0.1 10% 25V
C84	1-102-116-00	s	CERAMIC 680PF 10% 50V
C86	1-130-016-00	s	FILM 680PF 5% 50V
C96	1-107-163-00	s	MICA 47PF 5% 500V
C112	1-131-341-00	s	ELECT 0.1 10% 25V
C113	1-102-112-00	s	CERAMIC 330PF 10% 50V
C115	1-102-106-00	s	CERAMIC 100PF 10% 50V
C116	1-131-408-00	s	ELECT 1 10% 25V
C119	1-102-114-00	s	CERAMIC 470PF 10% 50V
C120	1-102-114-00	s	CERAMIC 470PF 10% 50V
C121	1-102-114-00	s	CERAMIC 470PF 10% 50V
C130	1-102-114-00	s	CERAMIC 470PF 10% 50V
C134	1-102-114-00	s	CERAMIC 470PF 10% 50V
C139	1-102-114-00	s	CERAMIC 470PF 10% 50V
C143	1-102-110-00	s	CERAMIC 220PF 10% 50V
C175	1-102-114-00	s	CERAMIC 470PF 10% 50V
C198	1-123-299-00	s	ELECT 1000 20% 6.3V
C207	1-102-114-00	s	CERAMIC 470PF 10% 50V
C208	1-102-114-00	s	CERAMIC 470PF 10% 50V
C209	1-102-110-00	s	CERAMIC 220PF 10% 50V
C210	1-102-114-00	s	CERAMIC 470PF 10% 50V
C211	1-102-114-00	s	CERAMIC 470PF 10% 50V
C212	1-102-110-00	s	CERAMIC 220PF 10% 50V
C220	1-102-114-00	s	CERAMIC 470PF 10% 50V
C221	1-102-114-00	s	CERAMIC 470PF 10% 50V
C222	1-107-210-00	s	MICA 22PF 5% 500V
C223	1-107-210-00	s	MICA 22PF 5% 500V
C232	1-102-106-00	s	CERAMIC 100PF 10% 50V
C502	1-131-341-00	s	ELECT 0.1 10% 25V
C504	1-102-112-00	s	CERAMIC 330PF 10% 50V
C507	1-123-613-00	s	ELECT 3.3 20% 35V
C508	1-123-610-00	s	ELECT 0.47 20% 50V
C513	1-107-210-00	s	MICA 22PF 5% 500V
C517	1-107-210-00	s	MICA 22PF 5% 500V
C519	1-107-210-00	s	MICA 22PF 5% 500V
C521	1-107-210-00	s	MICA 22PF 5% 500V
C530	1-123-311-00	s	ELECT 1000 20% 10V
C537	1-123-299-00	s	ELECT 1000 20% 6.3V
C540	1-123-299-00	s	ELECT 1000 20% 6.3V
C552	1-131-404-00	s	ELECT 0.22 10% 25V
C563	1-123-613-00	s	ELECT 3.3 20% 35V
C902	1-107-169-00	s	MICA 100PF 5% 500V
C903	1-107-169-00	s	MICA 100PF 5% 500V
CN3	1-562-409-11	o	PLUG,25P
CN4	1-562-408-11	o	PLUG,24P

Ref.No.	Parts No.	SP	Description
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
D4	8-719-911-19	s	1SS119
D5	8-719-911-19	s	1SS119
D6	8-719-911-19	s	1SS119
D7	8-719-911-19	s	1SS119
D8	8-719-911-19	s	1SS119
D9	8-719-911-19	s	1SS119
D10	8-719-911-19	s	1SS119
D11	8-719-911-19	s	1SS119
D12	8-719-982-04	s	ERB81-004
D13	8-719-982-04	s	ERB81-004
D14	8-719-911-19	s	1SS119
D15	8-719-911-19	s	1SS119
D20	8-719-911-19	s	1SS119
D21	8-719-911-19	s	1SS119
D22	8-719-911-19	s	1SS119
D23	8-719-911-19	s	1SS119
D24	8-719-911-19	s	1SS119
D25	8-719-911-19	s	1SS119
D26	8-719-911-19	s	1SS119
D27	8-719-911-19	s	1SS119
D28	8-719-911-19	s	1SS119
D29	8-719-911-19	s	1SS119
D30	8-719-911-19	s	1SS119
D31	8-719-911-19	s	1SS119
D32	8-719-911-19	s	1SS119
D33	8-719-911-19	s	1SS119
D34	8-719-911-19	s	1SS119
D35	8-719-911-19	s	1SS119
D36	8-719-911-19	s	1SS119
D37	8-719-911-19	s	1SS119
D39	8-719-911-19	s	1SS119
D40	8-719-911-19	s	1SS119
D41	8-719-911-19	s	1SS119
D42	8-719-911-19	s	1SS119
D43	8-719-911-19	s	1SS119
D52	8-719-911-19	s	1SS119
D53	8-719-911-19	s	1SS119
D54	8-719-911-19	s	1SS119
D55	8-719-911-19	s	1SS119
D56	8-719-911-19	s	1SS119
D57	8-719-911-19	s	1SS119
D58	8-719-911-19	s	1SS119
D59	8-719-911-19	s	1SS119
D60	8-719-911-19	s	1SS119
D61	8-719-911-19	s	1SS119
D70	8-719-911-19	s	1SS119
D72	8-719-911-19	s	1SS119
D80	8-719-911-19	s	1SS119
D501	8-719-911-19	s	1SS119
D504	8-719-911-19	s	1SS119
D505	8-719-911-19	s	1SS119
D506	8-719-911-19	s	1SS119
D507	8-719-911-19	s	1SS119
D508	8-719-911-19	s	1SS119
D509	8-719-911-19	s	1SS119
D510	8-719-911-19	s	1SS119
D513	8-719-911-19	s	1SS119
D514	8-719-911-19	s	1SS119
D515	8-719-911-19	s	1SS119
D517	8-719-911-19	s	1SS119
D518	8-719-911-19	s	1SS119

Ref.No.	Parts No.	SP	Description
IC10	8-759-900-37	s	SN74LS37N(TI)
IC11	8-759-708-05	s	NJM78L05A(JRC)
IC21	8-759-145-84	s	uPD4584BC(NEC)
IC22	8-759-240-71	s	TC4071BP(TOSHIBA)
IC23	8-759-240-69	s	TC4069UBP(TOSHIBA)
IC24	8-759-240-73	s	TC4073BP(TOSHIBA)
IC25	8-759-240-21	s	TC4021BP(TOSHIBA)
IC26	8-759-240-51	s	TC4051BP(TOSHIBA)
IC27	8-759-135-80	s	uPC358C(NEC)
IC28	8-759-240-51	s	TC4051BP(TOSHIBA)
IC29	8-759-345-38	s	HD14538BP(HITACHI)
IC30	8-759-135-80	s	uPC358C(NEC)
IC31	8-759-729-03	s	NJM2903D(JRC)
IC32	8-759-240-01	s	TC4001BP(TOSHIBA)
IC33	8-759-345-38	s	HD14538BP(HITACHI)
IC34	8-759-133-90	s	uPC339C(NEC)
IC35	8-759-135-80	s	uPC358C(NEC)
IC36	8-759-135-80	s	uPC358C(NEC)
IC37	8-759-700-58	s	NJM4558D-FA(JRC)
IC38	8-759-345-38	s	HD14538BP(HITACHI)
IC39	8-759-240-69	s	TC4069UBP(TOSHIBA)
IC40	8-759-250-67	s	TC5067BP(TOSHIBA)
IC41	8-759-145-58	s	uPC4558C(NEC)
IC42	8-759-240-53	s	TC4053BP(TOSHIBA)
IC43	8-759-132-40	s	uPC324C(NEC)
IC46	8-759-240-81	s	TC4081BP(TOSHIBA)
IC47	8-759-240-53	s	TC4053BP(TOSHIBA)
IC48	8-759-240-71	s	TC4071BP(TOSHIBA)
IC49	8-759-240-53	s	TC4053BP(TOSHIBA)
IC50	8-759-240-01	s	TC4001BP(TOSHIBA)
IC51	8-759-345-38	s	HD14538BP(HITACHI)
IC52	8-759-240-13	s	TC4013BP(TOSHIBA)
IC53	8-759-240-30	s	TC4030BP(TOSHIBA)
IC54	8-759-133-90	s	uPC339C(NEC)
IC55	8-759-145-58	s	uPC4558C(NEC)
IC56	8-759-145-58	s	uPC4558C(NEC)
IC57	8-759-240-69	s	TC4069UBP(TOSHIBA)
IC58	8-759-240-69	s	TC4069UBP(TOSHIBA)
IC59	8-759-240-11	s	TC4011BP(TOSHIBA)
IC60	8-759-145-58	s	uPC4558C(NEC)
IC61	8-759-729-03	s	NJM2903D(JRC)
IC62	8-759-135-80	s	uPC358C(NEC)
IC63	8-749-909-15	s	BX3915A(SONY)
IC64	8-759-705-58	s	NJM4558D-D(JRC)
IC65	8-749-939-14	s	BX3914(SONY)
IC66	8-759-240-53	s	TC4053BP(TOSHIBA)
IC68	8-759-240-01	s	TC4001BP(TOSHIBA)
IC69	8-759-240-30	s	TC4030BP(TOSHIBA)
IC70	8-759-240-71	s	TC4071BP(TOSHIBA)
IC71	8-759-145-58	s	uPC4558C(NEC)
IC72	8-759-135-80	s	uPC358C(NEC)
IC73	8-759-135-80	s	uPC358C(NEC)
IC75	8-759-240-50	s	TC4050BP(TOSHIBA)
IC76	8-759-145-58	s	uPC4558C(NEC)
IC77	8-759-240-81	s	TC4081BP(TOSHIBA)
IC80	8-759-729-03	s	NJM2903D(JRC)
IC81	8-759-132-40	s	uPC324C(NEC)
IC82	8-749-911-54	s	BX1154(SONY)
IC83	8-759-345-38	s	HD14538BP(HITACHI)
IC84	8-759-345-38	s	HD14538BP(HITACHI)

Ref.No.	Parts No.	SP	Description
IC85	8-759-240-25	s	TC4025BP(TOSHIBA)
IC86	8-759-240-69	s	TC4069UBP(TOSHIBA)
IC87	8-759-729-03	s	NJM2903D(JRC)
IC88	8-759-240-66	s	TC4066BP(TOSHIBA)
IC89	8-759-240-11	s	TC4011BP(TOSHIBA)
IC91	8-759-729-03	s	NJM2903D(JRC)
IC92	8-759-245-39	s	TC4539BP(TOSHIBA)
IC93	8-759-045-84	s	MC14584BCP(MOTOROLA)
IC95	8-759-345-38	s	HD14538BP(HITACHI)
IC96	8-759-729-03	s	NJM2903D(JRC)
IC97	8-751-941-04	s	CX194B-3(SONY)
IC98	8-759-345-38	s	HD14538BP(HITACHI)
IC99	8-759-240-53	s	TC4053BP(TOSHIBA)
IC102	8-759-240-71	s	TC4071BP(TOSHIBA)
IC103	8-759-240-53	s	TC4053BP(TOSHIBA)
IC104	8-759-240-66	s	TC4066BP(TOSHIBA)
IC110	8-759-940-94	s	MSM4094RS(OKI)
IC111	8-759-240-69	s	TC4069UBP(TOSHIBA)
IC112	8-759-345-38	s	HD14538BP(HITACHI)
IC113	8-759-040-46	s	HD14046BP(HITACHI)
IC114	8-759-345-38	s	HD14538BP(HITACHI)
IC116	8-759-240-13	s	TC4013BP(TOSHIBA)
IC117	8-759-132-40	s	uPC324C(NEC)
IC118	8-759-245-16	s	TC4516BP(TOSHIBA)
IC119	8-759-245-16	s	TC4516BP(TOSHIBA)
IC120	8-759-240-81	s	TC4081BP(TOSHIBA)
IC121	8-759-240-30	s	TC4030BP(TOSHIBA)
IC123	8-759-240-53	s	TC4053BP(TOSHIBA)
IC124	8-759-240-53	s	TC4053BP(TOSHIBA)
IC125	8-759-240-73	s	TC4073BP(TOSHIBA)
IC126	8-759-729-03	s	NJM2903D(JRC)
IC127	8-759-911-17	s	MB88501-207L(FUJITSU)
IC128	8-759-240-13	s	TC4013BP(TOSHIBA)
IC900	8-759-241-75	s	TC40175BP(TOSHIBA)
IC901	8-759-240-73	s	TC4073BP(TOSHIBA)
L1	1-459-155-00	s	45
L2	1-408-298-00	s	2mH
L3	1-459-155-00	s	45
Q2	8-729-606-32	s	2SC2603
Q3	8-729-606-32	s	2SC2603
Q5	8-729-188-23	s	2SD882
Q8	8-729-606-32	s	2SC2603
Q9	8-729-288-02	s	2SD880
Q11	8-729-315-63	s	2SB856
Q12	8-729-606-32	s	2SC2603
Q13	8-729-606-32	s	2SC2603
Q14	8-729-606-32	s	2SC2603
Q15	8-729-606-32	s	2SC2603
Q16	8-729-201-05	s	2SC2878-B
Q17	8-769-193-09	s	2SK43-3
Q18	8-729-606-32	s	2SC2603
Q19	8-729-606-32	s	2SC2603
Q20	8-729-103-43	s	2SB734
Q21	8-729-606-32	s	2SC2603
Q22	8-729-606-32	s	2SC2603
Q23	8-729-606-32	s	2SC2603
Q24	8-729-201-05	s	2SC2878-B

Ref.No.	Parts No.	SP	Description
Q25	8-729-606-32	s	2SC2603
Q26	8-729-606-32	s	2SC2603
Q27	8-729-606-32	s	2SC2603
Q29	8-729-606-32	s	2SC2603
Q502	8-729-606-32	s	2SC2603
Q503	8-729-606-32	s	2SC2603
Q505	8-729-201-05	s	2SC2878-B
Q506	8-729-201-05	s	2SC2878-B
Q507	8-729-201-05	s	2SC2878-B
Q508	8-729-201-05	s	2SC2878-B
Q509	8-729-606-32	s	2SC2603
Q510	8-729-606-32	s	2SC2603
Q511	8-729-606-32	s	2SC2603
Q512	8-729-606-32	s	2SC2603
Q520	8-729-606-32	s	2SC2603
R72	1-207-621-00	s	WIREWOUND 1.5 10% 3W
R83	1-207-636-00	s	WIREWOUND 100 10% 3W
R84	1-244-849-00	s	CARBON 100 5% 1/2W
R502	1-212-708-00	s	METAL 180K 1% 1/2W
R504	1-212-715-00	s	METAL 360K 1% 1/2W
R505	1-212-715-00	s	METAL 360K 1% 1/2W
RB4	1-231-411-00	s	100Kx8
RB5	1-231-411-00	s	100Kx8
RB6	1-231-411-00	s	100Kx8
RB7	1-235-109-00	s	22Kx8
RB8	1-231-387-00	s	NETTY,RES 25K/50K
RV3	1-228-297-00	s	VAR,CERMET 100K
RV4	1-228-297-00	s	VAR,CERMET 100K
RV5	1-228-297-00	s	VAR,CERMET 100K
RV9	1-228-296-00	s	VAR,CERMET 50K
RV10	1-228-295-00	s	VAR,CERMET 20K
RV11	1-228-292-00	s	VAR,CERMET 2K
RV12	1-228-298-00	s	VAR,CERMET 200K
RV13	1-228-297-00	s	VAR,CERMET 100K
RV14	1-224-940-00	s	VAR,CERMET 10K
RV15	1-228-293-00	s	VAR,CERMET 5K
RV16	1-228-295-00	s	VAR,CERMET 20K
RV17	1-228-293-00	s	VAR,CERMET 5K
RV18	1-228-293-00	s	VAR,CERMET 5K
RV19	1-228-293-00	s	VAR,CERMET 5K
RV20	1-228-299-00	s	VAR,CERMET 500K
RV21	1-228-298-00	s	VAR,CERMET 200K
RV22	1-228-294-00	s	VAR,CERMET 10K
RV23	1-228-296-00	s	VAR,CERMET 50K
RV24	1-228-297-00	s	VAR,CERMET 100K
RV25	1-228-297-00	s	VAR,CERMET 100K
RV501	1-228-294-00	s	VAR,CERMET 10K
RV502	1-228-294-00	s	VAR,CERMET 10K
RV503	1-228-296-00	s	VAR,CERMET 50K
RV504	1-228-293-00	s	VAR,CERMET 5K
RV505	1-228-294-00	s	VAR,CERMET 10K
RV506	1-228-294-00	s	VAR,CERMET 10K
RV507	1-228-294-00	s	VAR,CERMET 10K
RV508	1-228-294-00	s	VAR,CERMET 10K
RV520	1-228-289-00	s	VAR,CERMET 200
X1	1-527-980-00	s	4.43MHz
X3	1-527-376-00	s	3.579545MHz

SV-60 BOARD

	A-6715-215-A	o	MOUNTED CIRCUIT BOARD,SV-60
C114	1-123-822-00	s	ELECT 47 20% 10V
C541	1-131-408-00	s	ELECT 1 10% 25V
C542	1-131-408-00	s	ELECT 1 10% 25V
CN3	1-564-405-11	o	RECEPTACLE,25P
CN4	1-564-404-11	o	RECEPTACLE,24P
D38	8-719-911-19	s	1SS119
D511	8-719-911-19	s	1SS119
D512	8-719-911-19	s	1SS119
D516	8-719-911-19	s	1SS119
IC1	8-759-240-81	s	TC4081BP(TOSHIBA)
IC2	8-759-245-32	s	TC4532BP(TOSHIBA)
IC3	8-759-240-81	s	TC4081BP(TOSHIBA)
IC4	8-759-240-81	s	TC4081BP(TOSHIBA)
IC5	8-759-240-30	s	TC4030BP(TOSHIBA)
IC6	8-759-240-71	s	TC4071BP(TOSHIBA)
IC7	8-759-940-94	s	MSM4094RS(OKI)
IC8	8-759-940-94	s	MSM4094RS(OKI)
IC9	8-759-940-94	s	MSM4094RS(OKI)
IC12	8-759-240-11	s	TC4011BP(TOSHIBA)
IC13	8-759-245-32	s	TC4532BP(TOSHIBA)
IC14	8-759-240-73	s	TC4073BP(TOSHIBA)
IC15	8-759-240-81	s	TC4081BP(TOSHIBA)
IC16	8-759-345-38	s	HD14538BP(HITACHI)
IC17	8-759-240-69	s	TC4069UBP(TOSHIBA)
IC18	8-759-240-75	s	TC4075BP(TOSHIBA)
IC19	8-759-345-38	s	HD14538BP(HITACHI)
IC20	8-759-240-71	s	TC4071BP(TOSHIBA)
RB1	1-231-411-00	s	100Kx8
RB2	1-231-411-00	s	100Kx8
RB3	1-231-411-00	s	100Kx8

Ref.No.	Parts No.	SP	Description
SW-6 BOARD			
	1-611-543-00	o	PRINTED CIRCUIT BOARD,SW-6
CN1	1-564-413-11	o	RECEPTACLE,5P
S1	1-516-963-00	s	SLIDE "MONITOR"
S2	1-516-995-00	s	SLIDE "MIXING SELECT"
S3	1-516-994-00	s	SLIDE "LIMITER"
S4	1-516-994-00	s	SLIDE "MODE SELECT"
SW-7 BOARD			
	1-611-546-00	o	PRINTED CIRCUIT BOARD,SW-7
	1-557-236-11	o	FLAT CABLE,6P,SW7 TO SW8
CN1	1-564-414-11	o	RECEPTACLE,6P
CN2	1-564-412-11	o	RECEPTACLE,4P
CN3	1-564-415-11	o	RECEPTACLE,8P
D1	8-719-812-44	s	LED,TL0124 "AUTO OFF"
D2	8-719-812-44	s	LED,TL0124 "HOLD"
S1	1-516-994-00	s	SLIDE "CTL/TC"
S2	1-516-994-00	s	SLIDE "STD/NON STD"
S3	1-516-995-00	s	SLIDE "INPUT SELECT"
S4	1-516-995-00	s	SLIDE "REMOE SELECT"
SW-8 BOARD			
	1-611-547-00	o	PRINTED CIRCUIT BOARD,SW-8
S1	1-552-539-00	s	KEY "PRESET"
S2	1-552-539-00	s	KEY "ADVANCE"
S3	1-552-539-00	s	KEY "SHIFT"
S4	1-552-539-00	s	KEY "HOLD"
SW-13 BOARD			
	1-611-539-00	o	PRINTED CIRCUIT BOARD,SW-13
R1	1-214-574-00	s	METAL 5.1K 1% 1/8W
R2	1-214-535-00	s	METAL 120 1% 1/8W
R3	1-214-540-00	s	METAL 200 1% 1/8W
R4	1-214-579-00	s	METAL 8.2K 1% 1/8W
R5	1-214-574-00	s	METAL 5.1K 1% 1/8W
R6	1-214-559-00	s	METAL 1.2K 1% 1/8W
R7	1-214-559-00	s	METAL 1.2K 1% 1/8W
R101	1-214-574-00	s	METAL 5.1K 1% 1/8W
R102	1-214-535-00	s	METAL 120 1% 1/8W
R103	1-214-540-00	s	METAL 200 1% 1/8W
R104	1-214-579-00	s	METAL 8.2K 1% 1/8W
R105	1-214-574-00	s	METAL 5.1K 1% 1/8W
R106	1-214-559-00	s	METAL 1.2K 1% 1/8W
R107	1-214-559-00	s	METAL 1.2K 1% 1/8W
S1	1-516-272-21	s	SLIDE "CH-2 LEVEL"
S2	1-516-576-00	s	SLIDE "CH-2 600ohm"
S101	1-516-272-21	s	SLIDE "CH-1 LEVEL"
S102	1-516-576-00	s	SLIDE "CH-1 600ohm"

Ref.No.	Parts No.	SP	Description
SWITCHING REGULATOR UR-09			
⚠	1-413-166-11	s	SWITCHING REGULATOR UR-09
UR-09 C-1 BOARD			
	A-4925-035-A	o	MOUNTED CIRCUIT BOARD,UR-09 C-1
C171	1-136-141-00	s	MYLAR 0.001 10% 50V
C172	1-136-141-00	s	MYLAR 0.001 10% 50V
C173	1-124-126-00	s	ELECT 47 20% 25V
C174	1-131-416-00	s	TANTALUM 1.5 20% 16V
C175	1-130-652-00	s	FILM 3600P 2% 100V
C176	1-136-165-00	s	MYLAR 0.1 10% 50V
C177	1-136-145-00	s	MYLAR 0.0022 10% 50V
C178	1-124-330-00	s	ELECT 22 20% 50V
CN171	1-560-741-00	o	12P
D171	8-719-981-01	s	ERA81-004
D172	8-719-981-01	s	ERA81-004
D173	8-719-981-01	s	ERA81-004
D174	8-719-981-01	s	ERA81-004
D175	8-719-815-55	s	1S1555
D176	8-719-100-38	s	RD6.2EB2
D177	8-719-107-87	s	03P2M
D178	8-719-911-19	s	1SS119
IC171	8-759-937-59	s	MB3759 (FUJITSU)
L171	1-408-409-00	s	10uH
Q171	8-729-177-43	s	2SD774
Q172	8-729-177-43	s	2SD774
Q173	8-729-178-54	s	2SC2785
Q174	8-729-117-52	s	2SA1175
⚠ R173	1-247-131-00	s	CARBON 1K 5% 1/4W
RV171	1-228-865-11	s	TANTALUM 500
UR-09 C-2 BOARD			
	A-4925-036-A	o	MOUNTED CIRCUIT BOARD,UR-09 C-2
C271	1-136-141-00	s	MYLAR 0.001 10% 50V
C272	1-136-141-00	s	MYLAR 0.001 10% 50V
C273	1-124-126-00	s	ELECT 47 20% 25V
C274	1-131-416-00	s	TANTALUM 1.5 20% 16V
C275	1-130-652-00	s	FILM 3600P 2% 100V

Ref.No.	Parts No.	SP	Description
C276	1-136-165-00	s	MYLAR 0.1 10% 50V
C277	1-130-016-00	s	FILM 680P 5% 50V
C278	1-123-318-00	s	ELECT 33 20% 16V
CN271	1-560-741-00	o	12P
D271	8-719-981-01	s	ERA81-004
D272	8-719-981-01	s	ERA81-004
D273	8-719-981-01	s	ERA81-004
D274	8-719-981-01	s	ERA81-004
D275	8-719-815-55	s	1S1555
D276	8-719-100-71	s	RD15EB2
D277	8-719-107-87	s	03P2M
D278	8-719-911-19	s	1SS119
IC271	8-759-937-59	s	MB3759 (FUJITSU)
L271	1-408-409-00	s	10uH
Q271	8-729-177-43	s	2SD774
Q272	8-729-177-43	s	2SD774
Q273	8-729-178-54	s	2SC2785
Q274	8-729-117-52	s	2SA1175
⚠ R273	1-247-131-00	s	CARBON 1K 5% 1/4W
R276	1-247-904-49	s	CARBON 4700 2% 1/6W
RV271	1-228-865-11	s	TANTALUM 500

UR-09 C-3 BOARD

	A-4925-037-A	o	MOUNTED CIRCUIT BOARD,UR-09 C-3
C371	1-136-141-00	s	MYLAR 0.001 10% 50V
C372	1-136-141-00	s	MYLAR 0.001 10% 50V
C373	1-131-416-00	s	TANTALUME 1.5 20% 16V
C374	1-124-126-00	s	ELECT 47 20% 25V
C375	1-130-652-00	s	FILM 3600P 2% 100V
C376	1-130-015-00	s	FILM 560P 5% 50V
C377	1-136-169-00	s	MYLAR 0.22 10% 50V
C378	1-124-034-51	s	ELECT 33 20% 16V
C379	1-123-356-00	s	ELECT 10 20% 50V
CN371	1-560-741-00	o	12P
D371	8-719-981-01	s	1S2076A
D372	8-719-981-01	s	1S2076A
D373	8-719-981-01	s	1S2076A
D374	8-719-981-01	s	1S2076A
D375	8-719-815-55	s	1S1555
D376	8-719-100-85	s	RD22EB1
D377	8-719-107-87	s	03P2M

Ref.No.	Parts No.	SP	Description
IC371	8-759-937-59	s	MB3759 (FUJITSU)
L371	1-408-409-00	s	10uH
Q371	8-729-177-43	s	2SD774
Q372	8-729-177-43	s	2SD774
Q373	8-729-178-54	s	2SC2785
Q374	8-729-117-52	s	2SA1175
Q375	8-729-117-52	s	2SA1175
⚠ R373	1-247-131-00	s	CARBON 1K 5% 1/4W
R376	1-247-904-49	s	CARBON 4.7K 2% 1/6W
RV371	1-228-865-11	s	TANTALUM 500

UR-09 CN BOARD

	A-4925-034-A	o	MOUNTED CIRCUIT BOARD,UR-09 CN
C271	1-124-038-00	s	ELECT 1 20% 50V
C272	1-124-518-51	s	ELECT 470 20% 6.3V
C273	1-124-518-51	s	ELECT 470 20% 6.3V
C274	1-124-038-00	s	ELECT 1 20% 50V
C275	1-124-522-51	s	ELECT 270 20% 16V
C276	1-124-522-51	s	ELECT 270 20% 16V
C277	1-124-038-00	s	ELECT 1 20% 50V
C278	1-124-522-51	s	ELECT 270 20% 16V
C279	1-124-522-51	s	ELECT 270 20% 16V
C280	1-124-539-51	s	ELECT 330 20% 35V
	1-564-089-11	o	PIN,CONNECTOR 10P (x7)
CN271	1-560-300-00	o	RECEPTACLE,3P
D271	8-719-100-13	s	RD2.7EB2
D272	8-719-100-27	s	RD4.7EB2
D273	8-719-911-19	s	1SS119
D274	8-719-911-19	s	1SS119
D275	8-719-911-19	s	1SS119
D276	8-719-911-19	s	1SS119
D277	8-719-911-19	s	1SS119
D278	8-719-911-19	s	1SS119
D279	8-719-911-19	s	1SS119
D280	8-719-911-19	s	1SS119
D281	8-719-911-19	s	1SS119
D282	8-719-200-01	s	10E-1
D283	8-719-200-01	s	10E-1
IC271	8-759-908-15	s	TL431CLP (TI)
IC272	8-759-908-15	s	TL431CLP (TI)
IC273	8-759-908-15	s	TL431CLP (TI)

Ref.No.	Parts No.	SP	Description
L271	1-421-459-00	s	CHOKE
L272	1-421-465-00	s	CHOKE
L273	1-421-465-00	s	CHOKE
L274	1-421-421-00	s	CHOKE
L275	1-421-421-00	s	CHOKE
Q271	8-729-178-54	s	2SC2785
Q272	8-729-178-54	s	2SC2785
⚠ R271	1-247-079-00	s	CARBON 4.7 5% 1/4W
R275	1-247-123-00	s	CARBON 470 5% 1/4W
R276	1-247-123-00	s	CARBON 470 5% 1/4W
R279	1-247-123-00	s	CARBON 470 5% 1/4W
RV271	1-228-865-11	s	TANTALUM 500
RV272	1-228-865-11	s	TANTALUM 500
RV273	1-228-865-11	s	TANTALUM 500

UR-09 M BOARD

	1-611-861-11	o	PRINTED CIRCUIT BOARD,UR-09 M
⚠ C101	1-136-185-00	s	FILM 0.22 20% 250V
C102	1-136-185-00	s	FILM 0.22 20% 250V
C103	1-136-185-00	s	FILM 0.22 20% 250V
C104	1-161-953-00	s	CERAMIC 4700P 20% 400V
C105	1-161-953-00	s	CERAMIC 4700P 20% 400V
C106	1-161-953-00	s	CERAMIC 4700P 20% 400V
C107	1-161-953-00	s	CERAMIC 4700P 20% 400V
C108	1-161-742-00	s	CERAMIC 2200P 20% 400V
C109	1-161-742-00	s	CERAMIC 2200P 20% 400V
C110	1-161-742-00	s	CERAMIC 2200P 20% 400V
C111	1-161-742-00	s	CERAMIC 2200P 20% 400V
C112	1-125-267-00	s	ELECT 300 20% 400V
C113	1-125-267-00	s	ELECT 300 20% 400V
C114	1-125-267-00	s	ELECT 300 20% 400V
C115	1-123-601-00	s	ELECT 4.7 20% 250V
C116	1-123-601-00	s	ELECT 4.7 20% 250V
C117	1-123-601-00	s	ELECT 4.7 20% 250V
C118	1-123-601-00	s	ELECT 4.7 20% 250V
C119	1-123-601-00	s	ELECT 4.7 20% 250V
C120	1-123-601-00	s	ELECT 4.7 20% 250V
C121	1-161-911-11	s	CERAMIC 470P 10% 500V
C122	1-161-911-11	s	CERAMIC 470P 10% 500V
C123	1-124-490-51	s	ELECT 470 20% 25V
C125	1-130-808-00	s	FILM 0.22 10% 400V
C201	1-124-527-51	s	ELECT 8200 20% 6.3V
C202	1-124-527-51	s	ELECT 8200 20% 6.3V
C203	1-124-527-51	s	ELECT 8200 20% 6.3V
C204	1-124-521-51	s	ELECT 6800 20% 10V
C205	1-124-520-51	s	ELECT 3300 20% 10V
C206	1-124-525-51	s	ELECT 1000 20% 25V
C207	1-124-490-51	s	ELECT 470 20% 25V
C208	1-106-343-00	s	MYLAR 0.001 10% 200V
C209	1-106-343-00	s	MYLAR 0.001 10% 200V
C210	1-161-825-11	s	CERAMIC 220P 10% 500V
C211	1-161-825-11	s	CERAMIC 220P 10% 500V
C212	1-124-490-51	s	ELECT 470 20% 25V
C213	1-136-165-00	s	MYLAR 0.1 10% 50V
C214	1-136-159-00	s	MYLAR 0.033 10% 50V
C215	1-136-159-00	s	MYLAR 0.033 10% 50V
C217	1-130-918-00	s	FILM 200P 5% 50V
C218	1-136-153-00	s	MYLAR 0.01 10% 50V
C219	1-124-446-00	s	ELECT 47 20% 10V
C220	1-136-153-00	s	MYLAR 0.01 10% 50V
C221	1-136-153-00	s	MYLAR 0.01 10% 50V
C222	1-136-165-00	s	MYLAR 0.1 10% 50V
C223	1-136-165-00	s	MYLAR 0.1 10% 50V
C224	1-136-153-00	s	MYLAR 0.01 10% 50V
C225	1-124-523-11	s	ELECT 4700 20% 16V
C226	1-124-523-11	s	ELECT 4700 20% 16V
C227	1-124-523-11	s	ELECT 4700 20% 16V
C228	1-124-440-11	s	ELECT 3300 20% 25V
C229	1-124-526-00	s	ELECT 1800 20% 25V
C230	1-106-343-00	s	MYLAR 0.001 10% 200V
C231	1-106-343-00	s	MYLAR 0.001 10% 200V
C232	1-136-165-00	s	MYLAR 0.1 10% 50V
C233	1-136-159-00	s	MYLAR 0.033 10% 50V
C234	1-136-159-00	s	MYLAR 0.033 10% 50V
C235	1-136-165-00	s	MYLAR 0.1 10% 50V
C236	1-136-165-00	s	MYLAR 0.1 10% 50V
C237	1-124-523-11	s	ELECT 4700 20% 16V
C238	1-124-523-11	s	ELECT 4700 20% 16V
C239	1-124-523-11	s	ELECT 4700 20% 16V
C240	1-124-440-11	s	ELECT 3300 20% 25V
C241	1-124-526-00	s	ELECT 1800 20% 25V
C242	1-124-440-11	s	ELECT 3300 20% 25V
C243	1-124-526-00	s	ELECT 1800 20% 25V
C244	1-106-343-00	s	MYLAR 0.001 10% 200V
C245	1-106-343-00	s	MYLAR 0.001 10% 200V
C246	1-136-165-00	s	MYLAR 0.1 10% 50V
C247	1-136-159-00	s	MYLAR 0.033 10% 50V
C248	1-136-159-00	s	MYLAR 0.033 10% 50V
C249	1-136-165-00	s	MYLAR 0.1 10% 50V
C250	1-136-165-00	s	MYLAR 0.1 10% 50V
C251	1-136-153-00	s	MYLAR 0.01 10% 50V
CN204	1-560-300-00	o	RECEPTACLE,3P
D101	8-719-500-12	s	S10VB60
D102	8-719-902-42	s	ESAC33-02CV-F1
D103	8-719-911-19	s	1SS119
D104	8-719-100-89	s	RD24EB1
D201	8-719-300-29	s	CTG-31S
D202	8-719-903-16	s	ESAC85-009
D203	8-719-903-16	s	ESAC85-009
D204	8-719-902-42	s	ESAC33-02CV-F1
D205	8-719-104-07	s	F114E
D206	8-719-100-89	s	RD24EB1
D207	8-719-100-85	s	RD22EB1
D208	8-719-100-47	s	RD8.2EB1
D209	8-719-200-02	s	10E-2
D210	8-719-911-19	s	1SS119
D211	8-719-911-19	s	1SS119

Ref.No.	Parts No.	SP	Description
D212	8-719-911-19	s	1SS119
D213	8-719-911-19	s	1SS119
D214	8-719-902-43	s	ESAD33-02-CS
D215	8-719-902-42	s	ESAC33-02CV-F1
D216	8-719-100-89	s	RD24EB1
D217	8-719-100-85	s	RD22EB1
D218	8-719-911-19	s	1SS119
D219	8-719-911-19	s	1SS119
D220	8-719-911-19	s	1SS119
D221	8-719-911-19	s	1SS119
D222	8-719-901-56	s	ESAD33-02N
D223	8-729-902-86	s	ESAC33-02-NV-F1
D224	8-719-908-00	s	ESAC33-02CS
D225	8-719-100-98	s	RD30EB2
D226	8-719-100-89	s	RD24EB1
D227	8-719-100-85	s	RD22EB1
D228	8-719-100-85	s	RD22EB1
D229	8-719-911-19	s	1SS119
D230	8-719-911-19	s	1SS119
D231	8-719-911-19	s	1SS119
D232	8-719-911-19	s	1SS119
D233	8-719-100-70	s	RD15EB1
⚠ F101	1-532-604-21	s	3A 250V
IC101	8-759-171-12	s	uPC7812H (NEC)
IC201	8-759-171-15	s	uPC7815H (NEC)
IC202	8-759-178-05	s	uPC78L05 (NEC)
IC203	8-759-245-28	s	TC4528BP (TOSHIBA)
IC204	8-759-908-15	s	TL431CLP (TI)
L101	1-410-042-11	s	CHOKE
⚠ L102	1-421-395-00	s	FILTER,LINE
L103	1-421-557-11	s	4.4mH
L104	1-410-042-11	s	CHOKE
L201	1-421-505-21	s	47uH
L202	1-421-431-00	s	CHOKE
L203	1-410-047-11	s	CHOKE
L204	1-421-506-00	s	6.2uH
L205	1-421-459-00	s	CHOKE
L206	1-421-507-11	s	96uH
L207	1-421-431-00	s	CHOKE
L208	1-421-506-00	s	6.2uH
L209	1-421-459-00	s	CHOKE
L210	1-421-554-21	s	200uH
L211	1-421-431-00	s	CHOKE
L212	1-421-431-00	s	CHOKE
L213	1-421-459-00	s	CHOKE
L214	1-421-459-00	s	CHOKE
L215	1-421-459-00	s	CHOKE
PS101	1-532-605-00	s	LINK,IC

Ref.No.	Parts No.	SP	Description
Q101	8-729-301-76	s	STR-8124-R
Q102	8-729-301-76	s	STR-8124-R
Q103	8-729-301-76	s	STR-8124-R
Q201	8-729-331-53	s	2SC2315
Q202	8-729-331-53	s	2SC2315
Q203	8-729-331-53	s	2SC2315
Q204	8-729-331-53	s	2SC2315
Q205	8-729-331-53	s	2SC2315
Q206	8-729-178-52	s	2SC2785
Q207	8-729-117-52	s	2SA1175
Q208	8-729-117-52	s	2SA1175
Q209	8-729-177-52	s	2SA1175
Q210	8-729-178-52	s	2SC2785
Q211	8-729-178-52	s	2SC2785
Q212	8-729-177-52	s	2SA1175
Q213	8-729-177-52	s	2SA1175
Q214	8-729-177-52	s	2SA1175
Q215	8-729-177-52	s	2SA1175
Q216	8-729-177-52	s	2SA1175
Q217	8-729-177-52	s	2SA1175
⚠ R101	1-205-636-11	s	CEMENT 3.3 5% 5W
R102	1-205-636-11	s	CEMENT 3.3 5% 5W
R103	1-205-636-11	s	CEMENT 3.3 5% 5W
R104	1-205-625-00	s	CEMENT 220 5% 5W
R201	1-205-622-00	s	CEMENT 33 5% 5W
R203	1-247-679-61	s	CARBON 120 5% 1/4W
R204	1-205-623-00	s	CEMENT 47 5% 5W
R205	1-247-683-61	s	CARBON 470 5% 1/4W
R228	1-205-622-00	s	CEMENT 33 5% 5W
R231	1-247-679-61	s	CARBON 120 5% 1/4W
R232	1-205-623-00	s	CEMENT 47 5% 5W
R239	1-205-622-00	s	CEMENT 33 5% 5W
R241	1-247-679-61	s	CARBON 120 5% 1/4W
R242	1-205-623-00	s	CEMENT 47 5% 5W
RY101	1-515-357-00	s	RELAY
⚠ T101	1-447-746-11	s	CONVERTER
T102	1-421-460-00	s	CURRENT
T103	1-437-120-00	s	DRIVE
T104	1-447-748-11	s	CONVERTER
T105	1-421-460-00	s	CURRENT
T106	1-437-120-00	s	DRIVE
T107	1-447-747-11	s	CONVERTER
T108	1-421-460-00	s	CURRENT
T109	1-437-120-00	s	DRIVE
T110	1-447-426-12	s	CONVERTER
T111	1-447-753-11	s	CONVERTER

SWITCHING REGULATOR, SY-4

Ref.No.	Parts No.	SP	Description
	UR-09 ST-21 BOARD		
	1-607-595-13	o	PRINTED CIRCUT BOARD,ST-21
C351	1-130-512-00	s	MYLAR 0.0047 10% 50V
C352	1-124-043-51	s	ELECT 2.2 20% 50V
C353	1-124-043-51	s	ELECT 2.2 20% 50V
CN351	1-564-090-11	o	5P
D351	8-719-104-07	s	F114E
D352	8-719-104-07	s	F114E
D353	8-719-100-29	s	RD5.1EB1
D354	8-719-923-76	s	1S2076A
D355	8-719-923-76	s	1S2076A
D356	8-719-923-76	s	1S2076A
D357	8-719-923-76	s	1S2076A
D358	8-719-100-16	s	RD3.3EB1
Q351	8-729-175-22	s	2SC2752
Q352	8-729-115-63	s	2SA1156
Q353	8-729-102-02	s	2SD1020
⚠R353	1-247-115-00	s	CARBON 220 5% 1/4W
R354	1-247-115-00	s	CARBON 220 5% 1/4W
R355	1-247-103-00	s	CARBON 68 5% 1/4W
	UR-09 FRAME		
CN901	1-508-840-00	o	RECEPTACLE HOUSING,9P
	1-535-072-00	s	CONTACT,FEMALE
CN902	1-509-890-00	o	RECEPTACLE HOUSING,12P
	1-535-072-00	s	CONTACT,FEMALE
⚠CN903	1-509-889-00	o	PULG HOUSING,12P
	1-535-070-00	o	CONTACT,MALE
TS201	1-570-258-11	s	SWITCH,THERMAL REED AC/DC 120V 0.5A
	1-541-209-00	s	MOTOR,BRUSHLESS FAN DC 24V

Ref.No.	Parts No.	SP	Description
	SY-4 BOARD		
	A-6717-341-A	o	MOUNTED CIRCUIT BOARD,SY-4
C2	1-123-821-00	s	ELECT 47 20% 16V
C5	1-102-110-00	s	CERAMIC 220PF 10% 50V
C6	1-102-110-00	s	CERAMIC 220PF 10% 50V
C8	1-102-110-00	s	CERAMIC 220PF 10% 50V
C9	1-102-110-00	s	CERAMIC 220PF 10% 50V
C10	1-102-110-00	s	CERAMIC 220PF 10% 50V
C11	1-102-114-00	s	CERAMIC 470PF 10% 50V
C15	1-102-114-00	s	CERAMIC 470PF 10% 50V
C18	1-102-112-00	s	CERAMIC 330PF 10% 50V
C19	1-102-110-00	s	CERAMIC 220PF 10% 50V
C20	1-102-110-00	s	CERAMIC 220PF 10% 50V
C21	1-102-110-00	s	CERAMIC 220PF 10% 50V
C22	1-102-110-00	s	CERAMIC 220PF 10% 50V
C25	1-102-110-00	s	CERAMIC 220PF 10% 50V
C26	1-102-110-00	s	CERAMIC 220PF 10% 50V
C27	1-102-110-00	s	CERAMIC 220PF 10% 50V
C31	1-102-106-00	s	CERAMIC 100PF 10% 50V
C32	1-107-205-00	s	MICA 13PF 5% 500V
CN1	1-560-454-31	o	HEADER,40P
CN2	1-560-454-31	o	HEADER,40P
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
D4	8-719-911-19	s	1SS119
D5	8-719-911-19	s	1SS119
D6	8-719-911-19	s	1SS119
D7	8-719-911-19	s	1SS119
IC1	8-759-926-31	s	AM26LS31PC(AMD)
IC2	8-759-926-32	s	AM26LS32PC(AMD)
IC3	8-759-200-39	s	TC40H240P(TOSHIBA)
IC4	8-759-902-44	s	SN74LS244N(TI)
IC5	8-759-902-44	s	SN74LS244N(TI)
IC6	8-759-902-44	s	SN74LS244N(TI)
IC7	8-759-940-94	s	MSM4094RS(OKI)
IC8	8-759-900-32	s	SN74LS32N(TI)
IC9	8-759-729-03	s	NJM2903D(JRC)
IC10	8-759-926-32	s	AM26LS32PC(AMD)

Ref.No.	Parts No.	SP	Description
IC11	8-759-926-31	s	AM26LS31PC(AMD)
IC12	8-759-200-39	s	TC40H240P(TOSHIBA)
IC13	8-759-902-44	s	SN74LS244N(TI)
IC14	8-759-902-44	s	SN74LS244N(TI)
IC15	8-759-940-94	s	MSM4094RS(OKI)
IC16	8-759-902-40	s	SN74LS240N(TI)
IC17	8-759-145-84	s	uPD4584BC(NEC)
IC18	8-759-600-61	s	M54529AP(MITSUBISHI)
IC19	8-759-200-39	s	TC40H240P(TOSHIBA)
IC20	8-759-902-44	s	SN74LS244N(TI)
IC21	8-759-902-44	s	SN74LS244N(TI)
IC22	8-759-240-21	s	TC4021BP(TOSHIBA)
IC23	8-759-240-21	s	TC4021BP(TOSHIBA)
IC24	8-759-240-21	s	TC4021BP(TOSHIBA)
IC25	8-759-240-21	s	TC4021BP(TOSHIBA)
IC26	8-759-900-37	s	SN74LS37N(TI)
IC27	8-759-600-61	s	M54529AP(MITSUBISHI)
IC28	8-759-600-61	s	M54529AP(MITSUBISHI)
IC29	8-759-240-21	s	TC4021BP(TOSHIBA)
IC30	8-759-200-46	s	TC40H273P(TOSHIBA)
IC31	8-759-200-46	s	TC40H273P(TOSHIBA)
IC32	8-759-200-46	s	TC40H273P(TOSHIBA)
IC33	8-759-200-46	s	TC40H273P(TOSHIBA)
IC34	8-759-200-46	s	TC40H273P(TOSHIBA)
IC35	8-759-200-46	s	TC40H273P(TOSHIBA)
IC36	8-759-200-46	s	TC40H273P(TOSHIBA)
IC37	8-759-902-40	s	SN74LS240N(TI)
IC38	8-759-902-40	s	SN74LS240N(TI)
IC39	8-759-240-81	s	TC4081BP(TOSHIBA)
IC40	8-759-240-21	s	TC4021BP(TOSHIBA)
IC41	8-759-200-46	s	TC40H273P(TOSHIBA)
IC42	8-759-200-46	s	TC40H273P(TOSHIBA)
IC43	8-759-200-46	s	TC40H273P(TOSHIBA)
IC44	8-759-200-46	s	TC40H273P(TOSHIBA)
IC45	8-759-200-46	s	TC40H273P(TOSHIBA)
IC46	8-759-200-46	s	TC40H273P(TOSHIBA)
IC47	8-759-200-46	s	TC40H273P(TOSHIBA)
IC48	8-759-240-21	s	TC4021BP(TOSHIBA)
IC49	8-759-240-21	s	TC4021BP(TOSHIBA)
IC50	8-759-600-61	s	M54529AP(MITSUBISHI)
IC51	8-759-940-94	s	MSM4094RS(OKI)
IC52	8-759-902-44	s	SN74LS244N(TI)
IC53	8-759-901-38	s	SN74LS138N(TI)
IC54	8-759-902-44	s	SN74LS244N(TI)
IC55	8-759-902-44	s	SN74LS244N(TI)
IC56	8-759-902-45	s	SN74LS245N(TI)
IC57	8-759-900-00	s	SN74LS00N(TI)
IC58	8-759-900-08	s	SN74LS08N(TI)
IC59	8-759-240-21	s	TC4021BP(TOSHIBA)
IC60	8-759-240-21	s	TC4021BP(TOSHIBA)
IC61	8-759-600-61	s	M54529AP(MITSUBISHI)
IC62	8-759-900-37	s	SN74LS37N(TI)
IC63	8-759-901-38	s	SN74LS138N(TI)
IC64	8-759-901-38	s	SN74LS138N(TI)
IC65	8-759-901-38	s	SN74LS138N(TI)
IC66	8-759-901-38	s	SN74LS138N(TI)
IC67	8-759-901-39	s	SN74LS139N(TI)
IC68	8-759-900-32	s	SN74LS32N(TI)
IC69	8-759-900-32	s	SN74LS32N(TI)
IC70	8-759-900-37	s	SN74LS37N(TI)

Ref.No.	Parts No.	SP	Description
IC71	8-759-240-50	s	TC4050BP(TOSHIBA)
IC72	8-759-240-73	s	TC4073BP(TOSHIBA)
IC73	8-759-345-38	s	HD14538BP(HITACHI)
IC74 IC75 IC76	A-6415-040-D	s	ROM ASS'Y
IC78	8-759-905-23	s	MSM2128-15RS(OKI)
IC79	8-759-145-84	s	uPD4584BC(NEC)
IC80	8-759-900-37	s	SN74LS37N(TI)
IC81	8-759-345-38	s	HD14538BP(HITACHI)
IC82	8-759-240-11	s	TC4011BP(TOSHIBA)
IC83	8-759-902-44	s	SN74LS244N(TI)
IC84	8-759-916-82	s	LH0082A(SHARP)
IC85	8-759-916-82	s	LH0082A(SHARP)
IC86	8-759-916-82	s	LH0082A(SHARP)
IC87	8-759-916-84	s	LH0084A(SHARP)
IC88	8-759-223-68	s	TC40H368P(TOSHIBA)
IC89	8-759-900-37	s	SN74LS37N(TI)
IC90	8-759-240-13	s	TC4013BP(TOSHIBA)
IC91	8-759-145-84	s	uPD4584BC(NEC)
IC92	8-759-240-24	s	TC4024BP(TOSHIBA)
IC93	8-759-916-80	s	LH0080A(SHARP)
IC94	8-759-902-44	s	SN74LS244N(TI)
IC95	8-759-901-64	s	SN74LS164N(TI)
IC96	8-759-223-68	s	TC40H368P(TOSHIBA)
IC97	8-759-910-74	s	SN74S74N(TI)
IC98	8-759-100-88	s	uPD8279C-5(NEC)
IC99	8-759-200-43	s	TC40H244P(TOSHIBA)
IC100	8-759-600-61	s	M54529AP(MITSUBISHI)
IC101	8-759-240-20	s	TC4020BP(TOSHIBA)
IC102	8-759-901-64	s	SN74LS164N(TI)
IC103	8-759-910-04	s	SN74S04N(TI)
IC104	8-759-600-61	s	M54529AP(MITSUBISHI)
IC105	8-759-600-61	s	M54529AP(MITSUBISHI)
IC106	8-759-600-61	s	M54529AP(MITSUBISHI)
L1	1-459-155-00	s	45
L2	1-408-080-00	s	100
L3	1-408-080-00	s	100
L4	1-408-080-00	s	100
RV1	1-228-298-00	s	VAR,CERMET 200K
SW1	1-552-509-00	s	DIP
SW2	1-552-509-00	s	DIP
SW3	1-552-782-00	s	DIP
SW4	1-552-782-00	s	DIP
SW5	1-552-782-00	s	DIP
SW6	1-552-509-00	s	DIP
SW7	1-553-564-00	s	ROTARY
X1	1-527-520-00	s	8MHz

Ref.No.	Parts No.	SP	Description
TC-28 BOARD			
	A-6717-353-B	o	MOUNTED CIRCUIT BOARD,TC-28
C6	1-107-159-00	s	MICA 33PF 5% 500V
C11	1-107-205-00	s	MICA 13PF 5% 500V
C18	1-107-159-00	s	MICA 33PF 5% 500V
C25	1-131-341-00	s	ELECT 0.1 10% 25V
C26	1-102-106-00	s	CERAMIC 100PF 10% 50V
D2	8-719-200-02	s	10E-2
D3	8-719-911-19	s	1SS119
D4	8-719-911-19	s	1SS119
D5	8-719-911-19	s	1SS119
D6	8-719-911-19	s	1SS119
D7	8-719-911-19	s	1SS119
D8	8-719-911-19	s	1SS119
D10	8-719-400-35	s	LED,LN35BP "TC EXIST"
D13	8-719-911-19	s	1SS119
D14	8-719-911-19	s	1SS119
D15	8-719-911-19	s	1SS119
IC1	8-759-909-16	s	CX7907A(SONY)
IC2	8-759-909-72	s	CX7912A(SONY)
IC3	8-759-040-46	s	HD14046BP(HITACHI)
IC4	8-759-240-50	s	TC4050BP(TOSHIBA)
IC5	8-759-240-93	s	TC4093BP(TOSHIBA)
IC6	8-759-914-33	s	LH5101-L3(SHARP)
IC7	8-759-914-33	s	LH5101-L3(SHARP)
IC8	8-759-200-39	s	TC40H240P(TOSHIBA)
IC9	8-759-345-38	s	HD14538BP(HITACHI)
IC10	8-759-600-61	s	M54529AP(MITSBUBISHI)
IC11	8-759-220-00	s	TC40H000P(TOSHIBA)
IC12	8-759-240-13	s	TC4013BP(TOSHIBA)
IC13	8-759-145-19	s	uPD4519BC(NEC)
IC14	8-759-220-02	s	TC40H002P(TOSHIBA)
IC15	8-759-200-43	s	TC40H244P(TOSHIBA)
IC16	8-759-200-43	s	TC40H244P(TOSHIBA)
IC17	8-759-145-19	s	uPD4519BC(NEC)
IC18	8-759-200-50	s	TC40H374P(TOSHIBA)
IC19	8-759-200-50	s	TC40H374P(TOSHIBA)
IC20	8-759-926-40	s	SN74LS640N(TI)
IC21	8-759-240-13	s	TC4013BP(TOSHIBA)
IC22	8-759-240-19	s	TC4019BP(TOSHIBA)
IC23	8-759-345-38	s	HD14538BP(HITACHI)
IC24	8-759-240-30	s	TC4030BP(TOSHIBA)
IC25	8-759-240-49	s	TC4049BP(TOSHIBA)
IC26	8-759-245-12	s	TC4512BP(TOSHIBA)
IC27	8-759-245-12	s	TC4512BP(TOSHIBA)
IC28	8-759-245-12	s	TC4512BP(TOSHIBA)
IC29	8-759-220-32	s	TC40H032P(TOSHIBA)
IC30	8-759-200-22	s	TC40H138P(TOSHIBA)
IC31	8-759-200-39	s	TC40H240P(TOSHIBA)
IC32	8-759-901-09	s	SN74LS109AN(TI)
IC33	8-759-200-39	s	TC40H240P(TOSHIBA)
IC34	8-759-240-53	s	TC4053BP(TOSHIBA)
IC35	8-759-220-04	s	TC40H004P(TOSHIBA)
IC36	8-759-240-01	s	TC4001BP(TOSHIBA)
IC37	8-759-240-49	s	TC4049BP(TOSHIBA)
IC38	8-759-910-04	s	SN74S04N(TI)
IC39	8-759-200-07	s	TC40H157P(TOSHIBA)
IC40	8-759-200-39	s	TC40H240P(TOSHIBA)
IC41	8-759-914-33	s	LH5101-L3(SHARP)
IC42	8-759-914-33	s	LH5101-L3(SHARP)
IC43	8-759-200-43	s	TC40H244P(TOSHIBA)
IC44	8-759-240-11	s	TC4011BP(TOSHIBA)
IC45	8-759-240-49	s	TC4049BP(TOSHIBA)
IC46	8-759-600-61	s	M54529AP(MITSUBISHI)
L1	1-459-155-00	s	45
L2	1-459-155-00	s	45
S1	1-553-441-00	s	TOGGLE
S2	1-553-441-00	s	TOGGLE
S3	1-553-441-00	s	TOGGLE
S4	1-516-923-21	s	DIP
S5	1-516-923-21	s	DIP
S6	1-553-441-00	s	TOGGLE
X1	1-527-227-00	s	14.31818MHz
TE-2 BOARD			
	1-608-060-00	o	PRINTED CIRCUIT BOARD,TE-2
PH1	8-719-104-42	s	PS4005-L(NEC)
TR-18 BOARD			
	1-611-279-00	o	PRINTED CIRCUIT BOARD,TR-18
RM1	8-749-020-80	s	DM208
VR-10 BOARD			
	1-611-544-00	o	PRINTED CIRCUIT BOARD,VR-10
CN1	1-508-795-00	s	SIDE-TYPE RECEPTACLE,12P
CN2	1-508-795-00	s	SIDE-TYPE RECEPTACLE,12P
VR1	1-230-340-11	s	VAR,CARBON 10K WITH SWITCH "CH-1 REC LEVEL"
VR2	1-230-340-11	s	VAR,CARBON 10K WITH SWITCH "CH-1 PB LEVEL"
VR3	1-230-340-11	s	VAR,CARBON 10K WITH SWITCH "CH-2 REC LEVEL"
VR4	1-230-340-11	s	VAR,CARBON 10K WITH SWITCH "CH-2 PB LEVEL"
VR5	1-230-341-11	s	VAR,CARBON 10K WITH SWITCH "VIDEO LEVEL"
VR6	1-230-339-11	s	VAR,CARBON 100K "TRACKING"

Ref.No.	Parts No.	SP	Description
YC-14 BOARD			
	P: A-6711-536-C	o	MOUNTED CIRCUIT BOARD,YC-14
	S: A-6711-573-C		WITH DU-73 BOARD
DU-73 BOARD			
	A-6710-498-A	o	MOUNTED CIRCUIT BOARD,DU-73
C150	1-163-021-00	s	CHIP,CERAMIC 0.01 10% 50V
C151	1-163-251-00	s	CHIP,CERAMIC 100PF 5% 50V
C152	1-163-251-00	s	CHIP,CERAMIC 100PF 5% 50V
C153	1-163-021-00	s	CHIP,CERAMIC 0.01 10% 50V
C154	1-163-021-00	s	CHIP,CERAMIC 0.01 10% 50V
C155	1-163-021-00	s	CHIP,CERAMIC 0.01 10% 50V
C156	1-163-021-00	s	CHIP,CERAMIC 0.01 10% 50V
C157	1-163-021-00	s	CHIP,CERAMIC 0.01 10% 50V
C158	1-163-021-00	s	CHIP,CERAMIC 0.01 10% 50V
C159	1-123-822-00	s	ELECT 47 20% 10V
C160	1-163-037-00	s	CHIP,CERAMIC 0.022 10% 25V
C162	1-163-037-00	s	CHIP,CERAMIC 0.022 10% 25V
C163	1-163-037-00	s	CHIP,CERAMIC 0.022 10% 25V
CN7	1-560-906-00	o	10P
IC13	8-720-002-92	s	TRANSISOR,TX429M
IC14	8-759-969-13	s	SN16913P(TI)
IC15	8-759-145-58	s	uPC4558C(NEC)
Q30	8-729-271-22	s	2SC2712
Q31	8-729-603-40	s	2SC403SP
Q32	8-729-271-22	s	2SC2712
R150	1-216-049-00	s	CHIP,METAL 1K 5% 1/10W
R151	1-216-057-00	s	CHIP,METAL 2.2K 5% 1/10W
R152	1-216-073-00	s	CHIP,METAL 10K 5% 1/10W
R153	1-216-073-00	s	CHIP,METAL 10K 5% 1/10W
R154	1-216-055-00	s	CHIP,METAL 1.8K 5% 1/10W
R155	1-216-049-00	s	CHIP,METAL 1K 5% 1/10W
R156	1-216-057-00	s	CHIP,METAL 2.2K 5% 1/10W
R157	1-216-049-00	s	CHIP,METAL 1K 5% 1/10W
R158	1-216-073-00	s	CHIP,METAL 10K 5% 1/10W
R159	1-216-049-00	s	CHIP,METAL 1K 5% 1/10W
R160	1-216-085-00	s	CHIP,METAL 33K 5% 1/10W
R161	1-216-073-00	s	CHIP,METAL 10K 5% 1/10W
R162	1-216-101-00	s	CHIP,METAL 150K 5% 1/10W
R163	1-216-073-00	s	CHIP,METAL 10K 5% 1/10W
R164	1-216-073-00	s	CHIP,METAL 10K 5% 1/10W
RV7	1-228-474-00	s	VAR,CERMET 10K

Ref.No.	Parts No.	SP	Description
YC-14 BOARD			
C18	1-109-692-00	s	MICA 620PF 1% 500V
C55	1-107-048-00	s	MICA 6.8PF 0.5PF 500V
C56	1-107-048-00	s	MICA 6.8PF 0.5PF 500V
C59	1-109-689-00	s	MICA 470PF 5% 500V
C70	1-123-617-00	s	ELECT 10 20% 16V
C71	1-123-617-00	s	ELECT 10 20% 16V
C76	1-107-159-00	s	MICA 33PF 5% 500V
C77	1-161-025-00	s	CERAMIC 0.1 10% 25V
C78	1-123-822-00	s	ELECT 47 20% 10V
C79	1-123-822-00	s	ELECT 47 20% 10V
C80	1-161-025-00	s	CERAMIC 0.1 10% 25V
C82	1-109-686-00	s	MICA 360PF 5% 500V
C83	1-107-202-00	s	MICA 10PF 5% 500V
C84	1-102-112-00	s	CERAMIC 330PF 10% 50V
C85	1-107-205-00	s	MICA 13PF 5% 500V
C91	1-123-822-00	s	ELECT 47 20% 10V
C92	1-123-822-00	s	ELECT 47 20% 10V
C93	1-107-041-51	s	MICA 1.8PF 0.5PF 500V
C202	1-123-822-00	s	ELECT 47 20% 10V
C221	1-109-692-00	s	MICA 620PF 1% 500V
C222	1-107-202-00	s	MICA 10PF 5% 500V
C255	1-107-204-00	s	MICA 12PF 5% 500V
C256	1-107-204-00	s	MICA 12PF 5% 500V
C257	1-109-689-00	s	MICA 470PF 5% 500V
C268	1-123-617-00	s	ELECT 10 20% 16V
C269	1-123-617-00	s	ELECT 10 20% 16V
C274	1-107-159-00	s	MICA 33PF 5% 500V
C277	1-161-025-00	s	CERAMIC 0.1 10% 25V
C278	1-123-822-00	s	ELECT 47 20% 10V
C279	1-109-687-00	s	MICA 390PF 5% 500V
C280	1-109-686-00	s	MICA 360PF 5% 500V
C284	1-102-112-00	s	CERAMIC 330PF 10% 50V
C285	1-107-205-00	s	MICA 13PF 5% 500V
C291	1-123-822-00	s	ELECT 47 20% 10V
C292	1-123-822-00	s	ELECT 47 20% 10V
C294	1-107-202-00	s	MICA 10PF 5% 500V
C406	1-123-822-00	s	ELECT 47 20% 10V
C412	1-123-821-00	s	ELECT 47 20% 16V
C418	1-123-821-00	s	ELECT 47 20% 16V
C420	1-123-821-00	s	ELECT 47 20% 16V
C422	1-107-210-00	s	MICA 22PF 5% 500V
C425	1-107-202-00	s	MICA 10PF 5% 500V
C430	1-123-822-00	s	ELECT 47 20% 10V
C434	1-123-821-00	s	ELECT 47 20% 16V
C455	1-107-157-00	s	MICA 27PF 5% 500V
C491	1-107-047-00	s	MICA 5.6PF 500V
C493	1-107-047-00	s	MICA 5.6PF 500V
C496	1-123-324-00	s	ELECT 1000 20% 16V
C497	1-107-157-00	S	MICA 27PF 5% 500V
C510	1-107-209-00	s	MICA 20PF 5% 500V
C512	1-107-043-00	s	MICA 2.7PF 500V
C513	1-107-204-00	s	MICA 12PF 5% 500V
C515	1-107-204-00	s	MICA 12PF 5% 500V
C519	1-124-473-11	s	ELECT 1000 20% 10V
C520	1-107-205-00	s	MICA 13PF 5% 500V
C523	1-109-692-00	s	MICA 620PF 1% 500V
C530	1-124-472-00	s	ELECT 470 20% 10V
C564	1-107-208-00	s	MICA 18PF 5% 500V

Ref.No.	Parts No.	SP	Description
C565	1-107-202-00	s	MICA 10PF 5% 500V
C568	1-123-822-00	s	ELECT 47 20% 10V
C571	1-124-471-00	s	ELECT 1000 20% 6.3V
C575	1-123-821-00	s	ELECT 47 20% 16V
C577	1-161-025-00	s	CERAMIC 0.1 10% 25V
C585	1-107-206-00	s	MICA 15PF 5% 500V
C604	1-123-821-00	s	ELECT 47 20% 16V
C605	1-123-821-00	s	ELECT 47 20% 16V
C616	1-124-473-11	s	ELECT 1000 20% 10V
C619	1-123-821-00	s	ELECT 47 20% 16V
C622	1-123-821-00	s	ELECT 47 20% 16V
C623	1-123-821-00	s	ELECT 47 20% 16V
C624	1-107-209-00	s	MICA 20PF 5% 500V
C626	1-123-822-00	s	ELECT 47 20% 10V
C627	1-123-821-00	s	ELECT 47 20% 16V
C628	1-123-617-00	s	ELECT 10 20% 16V
C629	1-107-210-00	s	MICA 22PF 5% 500V
C706	1-123-821-00	s	ELECT 47 20% 16V
C708	1-107-202-00	s	MICA 10PF 5% 500V
C712	1-123-821-00	s	ELECT 47 20% 16V
C717	1-123-821-00	s	ELECT 47 20% 16V
C719	1-123-822-00	s	ELECT 47 20% 10V
C720	1-123-821-00	s	ELECT 47 20% 16V
C724	1-107-210-00	s	MICA 22PF 5% 500V
C726	1-107-157-00	s	MICA 27PF 5% 500V
C727	1-107-202-00	s	MICA 10PF 5% 500V
C729	1-102-106-00	s	CERAMIC 100PF 10% 50V
C731	1-123-822-00	s	ELECT 47 20% 10V
C736	1-123-821-00	s	ELECT 47 20% 16V
C790	1-124-473-11	s	ELECT 1000 20% 10V
C792	1-107-205-00	s	MICA 13PF 5% 500V
C793	1-107-204-00	s	MICA 12PF 5% 500V
C794	1-109-692-00	s	MICA 620PF 1% 500V
C796	1-124-475-11	s	ELECT 470 20% 16V
C812	1-107-202-00	s	MICA 10PF 5% 500V
C813	1-107-204-00	s	MICA 12PF 5% 500V
C815	1-107-204-00	s	MICA 12PF 5% 500V
C840	1-107-043-00	s	MICA 2.7PF 500V
C859	1-107-208-00	s	MICA 18PF 5% 500V
C860	1-107-202-00	s	MICA 10PF 5% 500V
C863	1-123-822-00	s	ELECT 47 20% 10V
C866	1-124-471-00	s	ELECT 1000 20% 6.3V
C870	1-123-821-00	s	ELECT 47 20% 16V
C872	1-161-025-00	s	CERAMIC 0.1 10% 25V
C880	1-107-206-00	s	MICA 15PF 5% 500V
C1002	1-131-342-00	s	ELECT 0.15 10% 25V
C1003	1-131-342-00	s	ELECT 0.15 10% 25V
C1017	1-109-165-00	s	MICA 620PF 5% 300V
C1018	1-107-202-00	s	MICA 10PF 5% 500V
C1019	1-107-209-00	s	MICA 20PF 5% 500V
C1031	1-107-209-00	s	MICA 20PF 5% 500V
C1032	1-161-013-00	s	CERAMIC 0.01 10% 25V
C1033	1-161-013-00	s	CERAMIC 0.01 10% 25V
C1102	1-123-617-00	s	ELECT 10 20% 16V
CN401	1-560-733-00	s	PIN,SHORT
	1-565-413-11	o	SOCKET,SHORT
CN402	1-560-733-00	s	PIN,SHORT
	1-565-413-11	o	SOCKET,SHORT
CN801	1-560-733-00	s	PIN,SHORT
	1-565-413-11	o	SOCKET,SHORT

Ref.No.	Parts No.	SP	Description
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
D4	8-719-911-19	s	1SS119
D5	8-719-911-19	s	1SS119
D6	8-719-911-19	s	1SS119
D7	8-719-151-07	s	RD5.1E-B
D8	8-719-104-10	s	1SS99
D9	8-719-104-10	s	1SS99
D10	8-719-911-19	s	1SS119
D11	8-719-911-19	s	1SS119
D12	8-719-911-19	s	1SS119
D13	8-719-911-19	s	1SS119
D14	8-719-911-19	s	1SS119
D15	8-719-911-19	s	1SS119
D16	8-719-911-19	s	1SS119
D17	8-719-911-19	s	1SS119
D18	8-719-911-19	s	1SS119
D19	8-719-911-19	s	1SS119
D201	8-719-911-19	s	1SS119
D202	8-719-911-19	s	1SS119
D204	8-719-911-19	s	1SS119
D205	8-719-911-19	s	1SS119
D206	8-719-911-19	s	1SS119
D207	8-719-911-19	s	1SS119
D208	8-719-151-07	s	RD5.1E-B
D209	8-719-104-10	s	1SS99
D210	8-719-104-10	s	1SS99
D211	8-719-911-19	s	1SS119
D212	8-719-911-19	s	1SS119
D213	8-719-911-19	s	1SS119
D214	8-719-911-19	s	1SS119
D215	8-719-911-19	s	1SS119
D216	8-719-911-19	s	1SS119
D401	8-719-156-07	s	RD5.6E-B
D402	8-719-151-07	s	RD5.1E-B
D403	8-719-911-19	s	1SS119
D404	8-719-911-19	s	1SS119
D405	8-719-911-19	s	1SS119
D406	8-719-911-19	s	1SS119
D407	8-719-191-07	s	RD9.1E-B
D408	8-719-911-19	s	1SS119
D409	8-719-911-19	s	1SS119
D410	8-719-162-07	s	RD6.2E-B
D601	8-719-101-97	s	1SS97-1
D602	8-719-101-97	s	1SS97-1
D701	8-719-156-07	s	RD5.6E-B
D702	8-719-151-07	s	RD5.1E-B
D703	8-719-911-19	s	1SS119
D704	8-719-911-19	s	1SS119
D705	8-719-911-19	s	1SS119
D706	8-719-162-07	s	RD6.2E-B
D1002	8-719-151-07	s	RD5.1E-B
D1003	8-719-815-55	s	1S1555
D1004	8-719-815-55	s	1S1555
D1005	8-719-911-19	s	1SS119
D1006	8-719-151-07	s	RD5.1E-B
D1007	8-719-815-55	s	1S1555
D1008	8-719-815-55	s	1S1555
D1009	8-719-911-19	s	1SS119
D1010	8-719-911-19	s	1SS119

Ref.No.	Parts No.	SP	Description
DL201	1-415-339-00	s	300ns
DL401	1-415-154-00	s	1MHz 35ns
DL402	1-415-154-00	s	1MHz 35ns
DL503	1-415-184-00	s	100ns
DL601	1-415-096-00	s	300ns
DL701	1-415-154-00	s	1MHz 35ns
DL702	1-415-154-00	s	1MHz 35ns
DL802	1-415-184-00	s	100ns
IC1	8-741-128-20	s	BX1282(SONY)
IC2	8-749-936-51	s	BX365A(SONY)
IC3	8-759-990-82	s	TL082CP(TI)
IC4	8-759-145-58	s	uPC4558C(NEC)
IC5	8-759-001-16	s	MC10116L(MOTOROLA)
IC6	8-759-200-60	s	TA7060AP(TOSHIBA)
IC7	8-750-000-74	s	CX20061(SONY)
IC8	8-765-222-20	s	TRANSISTOR 2SC1963
IC9	8-765-222-20	s	TRANSISTOR 2SC1963
IC10	8-759-220-74	s	TC40H074P(TOSHIBA)
IC11	8-759-925-25	s	HA7-2525-5(HARRIS)
IC12	8-759-131-11	s	uPC311C(NEC)
IC13	8-759-902-21	s	SN74LS221N(TI)
IC14	8-759-926-10	s	TL610CP(TI)
IC15	8-759-926-10	s	TL610CP(TI)
IC16	8-759-900-03	s	SN74LS03N(TI)
IC17	8-759-103-19	s	uPC319C(NEC)
IC201	8-741-128-20	s	BX1282(SONY)
IC202	8-749-936-51	s	BX365A(SONY)
IC203	8-759-990-82	s	TL082CP(TI)
IC204	8-759-145-58	s	uPC4558C(NEC)
IC205	8-759-001-16	s	MC10116L(MOTOROLA)
IC206	8-759-200-60	s	TA7060AP(TOSHIBA)
IC207	8-750-000-74	s	CX20061(SONY)
IC208	8-765-222-20	s	TRANSISTOR 2SC1963
IC209	8-765-222-20	s	TRANSISTOR 2SC1963
IC210	8-759-220-74	s	TC40H074P(TOSHIBA)
IC211	8-759-925-25	s	HA7-2525-5(HARRIS)
IC212	8-759-131-11	s	uPC311C(NEC)
IC213	8-759-902-21	s	SN74LS221N(TI)
IC214	8-759-926-10	s	TL610CP(TI)
IC215	8-759-926-10	s	TL610CP(TI)
IC401	8-751-340-00	s	CX134A(SONY)
IC402	8-759-951-07	s	SN75107AN(TI)
IC403	8-741-114-00	s	BX1140(SONY)
			UP TO S/N 11272 (P)
			UP TO S/N 10060 (S)
	1-464-602-11	s	CIRCUIT UNIT,HF
			S/N 11273 AND LATER (P)
			S/N 10061 AND LATER (S)
IC404	8-759-208-94	s	CX894(SONY)
IC405	1-464-607-11	s	CIRCUIT UNIT,OR
IC406	8-759-700-14	s	NJM78M09A(JRC)
IC411	8-759-179-05	s	uPC7905H(NEC)
IC412	8-759-001-16	s	MC10116L(MOTOROLA)
IC413	8-759-001-98	s	MC10198L(MOTOROLA)
IC414	8-759-907-34	s	uA733HC(FSC)
IC508	8-749-938-90	s	BX389(SONY)
IC509	8-759-200-60	s	TA7060AP(TOSHIBA)
IC510	8-759-200-60	s	TA7060AP(TOSHIBA)
IC602	8-749-936-51	s	BX365A(SONY)
IC603	8-749-936-61	s	BX366A(SONY)
IC608	8-759-906-07	s	TL60JCP(TI)
IC611	8-741-109-90	s	BX1099(SONY)
IC612	8-749-938-80	s	BX388(SONY)
IC615	8-759-200-60	s	TA7060AP(TOSHIBA)
IC701	8-751-340-00	s	CX134A(SONY)
IC702	8-759-951-07	s	SN75107AN(TI)

Ref.No.	Parts No.	SP	Description
IC703	8-741-109-80	s	BX1098(SONY)
IC706	8-741-114-00	s	BX1140(SONY)
IC707	8-759-208-94	s	CX894(SONY)
IC714	8-749-936-51	s	BX365A(SONY)
IC715	8-759-001-16	s	MC10116L(MOTOROLA)
IC716	8-759-001-98	s	MC10198L(MOTOROLA)
IC717	8-759-907-34	s	uA733HC(FSC)
IC810	8-749-938-90	s	BX389(SONY)
IC811	8-759-200-60	s	TA7060AP(TOSHIBA)
IC812	8-759-200-60	s	TA7060AP(TOSHIBA)
FL401	1-235-190-00	s	LPF
FL701	1-235-284-00	s	LPF
L401	1-407-504-00	s	MICRO 10mH
L402	1-407-504-00	s	MICRO 10mH
L428	1-459-155-00	s	45
L429	1-459-155-00	s	45
L430	1-459-155-00	s	45
L622	1-407-500-00	s	MICRO 4.7mH
L701	1-407-504-00	s	MICRO 10mH
L702	1-407-504-00	s	MICRO 10mH
LV1	1-407-569-00	s	VAR,10
LV201	1-407-569-00	s	VAR,10
LV401	1-407-568-00	s	VAR,6.8
LV402	1-407-568-00	s	VAR,6.8
LV701	1-407-568-00	s	VAR,6.8
LV702	1-407-568-00	s	VAR,6.8
Q1	8-724-375-01	s	2SC403C
Q5	8-724-375-01	s	2SC403C
Q6	8-724-375-01	s	2SC403C
Q7	8-724-375-01	s	2SC403C
Q8	8-729-173-37	s	2SA733-P
Q9	8-729-173-37	s	2SA733-P
Q10	8-724-375-01	s	2SC403C
Q11	8-724-375-01	s	2SC403C
Q12	8-724-375-01	s	2SC403C
Q13	8-724-375-01	s	2SC403C
Q14	8-724-375-01	s	2SC403C
Q18	8-724-375-01	s	2SC403C
Q19	8-729-112-06	s	2SA1206
Q20	8-729-112-06	s	2SA1206
Q21	8-729-173-37	s	2SA733-P
Q22	8-765-300-00	s	2SC2009
Q23	8-765-300-00	s	2SC2009
Q24	8-765-300-00	s	2SC2009
Q25	8-765-300-00	s	2SC2009
Q26	8-729-663-47	s	2SC1364
Q27	8-729-173-37	s	2SA733-P
Q28	8-729-663-47	s	2SC1364
Q29	8-724-375-01	s	2SC403C
Q30	8-724-375-01	s	2SC403C
Q31	8-724-375-01	s	2SC403C

Ref.No.	Parts No.	SP	Description
Q32	8-724-375-01	s	2SC403C
Q33	8-724-375-01	s	2SC403C
Q36	8-724-375-01	s	2SC403C
Q37	8-729-663-47	s	2SC1364
Q38	8-724-375-01	s	2SC403C
Q40	8-724-375-01	s	2SC403C
Q41	8-724-375-01	s	2SC403C
Q42	8-729-201-05	s	2SC2878-B
Q43	8-729-173-37	s	2SA733-P
Q44	8-729-173-37	s	2SA733-P
Q45	8-724-375-01	s	2SC403C
Q46	8-729-112-06	s	2SA1206
Q47	8-724-375-01	s	2SC403C
Q48	8-724-375-01	s	2SC403C
Q49	8-729-201-05	s	2SC2878-B
Q50	8-729-201-05	s	2SC2878-B
Q51	8-729-201-05	s	2SC2878-B
Q52	8-729-201-05	s	2SC2878-B
Q53	8-729-663-47	s	2SC1364
Q201	8-724-375-01	s	2SC403C
Q205	8-724-375-01	s	2SC403C
Q206	8-724-375-01	s	2SC403C
Q207	8-724-375-01	s	2SC403C
Q208	8-729-173-37	s	2SA733-P
Q209	8-729-173-37	s	2SA733-P
Q210	8-724-375-01	s	2SC403C
Q211	8-724-375-01	s	2SC403C
Q212	8-724-375-01	s	2SC403C
Q213	8-724-375-01	s	2SC403C
Q214	8-724-375-01	s	2SC403C
Q218	8-724-375-01	s	2SC403C
Q219	8-729-112-06	s	2SA1206
Q220	8-729-112-06	s	2SA1206
Q221	8-729-173-37	s	2SA733-P
Q222	8-765-300-00	s	2SC2009
Q223	8-765-300-00	s	2SC2009
Q224	8-765-300-00	s	2SC2009
Q225	8-765-300-00	s	2SC2009
Q226	8-729-663-47	s	2SC1364
Q227	8-729-173-37	s	2SA733-P
Q228	8-729-663-47	s	2SC1364
Q229	8-724-375-01	s	2SC403C
Q230	8-724-375-01	s	2SC403C
Q231	8-724-375-01	s	2SC403C
Q232	8-724-375-01	s	2SC403C
Q233	8-724-375-01	s	2SC403C
Q236	8-724-375-01	s	2SC403C
Q239	8-724-375-01	s	2SC403C
Q240	8-724-375-01	s	2SC403C
Q241	8-724-375-01	s	2SC403C
Q242	8-729-201-05	s	2SC2878-B
Q243	8-729-173-37	s	2SA733-P
Q244	8-729-173-37	s	2SA733-P
Q245	8-724-375-01	s	2SC403C
Q246	8-729-112-06	s	2SA1206

Ref.No.	Parts No.	SP	Description
Q247	8-724-375-01	s	2SC403C
Q248	8-724-375-01	s	2SC403C
Q401	8-724-375-01	s	2SC403C
Q402	8-724-375-01	s	2SC403C
Q403	8-724-375-01	s	2SC403C
Q404	8-724-375-01	s	2SC403C
Q405	8-724-375-01	s	2SC403C
Q406	8-729-173-37	s	2SA733-P
Q407	8-724-375-01	s	2SC403C
Q408	8-724-375-01	s	2SC403C
Q409	8-724-375-01	s	2SC403C
Q410	8-724-375-01	s	2SC403C
Q411	8-729-663-47	s	2SC1364
Q412	8-729-374-02	s	2SB740
Q413	8-724-375-01	s	2SC403C
Q414	8-724-375-01	s	2SC403C
Q415	8-724-375-01	s	2SC403C
Q416	8-724-375-01	s	2SC403C
Q418	8-729-201-05	s	2SC2878-B
Q420	8-729-190-12	s	2SC2901
Q421	8-729-110-53	s	2SA1005
Q422	8-729-110-53	s	2SA1005
Q423	8-724-375-01	s	2SC403C
Q424	8-724-375-01	s	2SC403C
Q425	8-724-375-01	s	2SC403C
Q426	8-729-201-05	s	2SC2878-B
Q427	8-724-375-01	s	2SC403C
Q430	8-724-375-01	s	2SC403C
Q497	8-729-603-50	s	2SC403SP
Q517	8-724-375-01	s	2SC403C
Q518	8-724-375-01	s	2SC403C
Q519	8-729-603-50	s	2SC403SP
Q520	8-724-375-01	s	2SC403C
Q521	8-724-375-01	s	2SC403C
Q522	8-724-375-01	s	2SC403C
Q523	8-724-375-01	s	2SC403C
Q603	8-724-375-01	s	2SC403C
Q604	8-724-375-01	s	2SC403C
Q606	8-724-375-01	s	2SC403C
Q701	8-724-375-01	s	2SC403C
Q702	8-724-375-01	s	2SC403C
Q703	8-729-201-05	s	2SC2878-B
Q704	8-724-375-01	s	2SC403C
Q705	8-729-173-37	s	2SA733-P
Q706	8-724-375-01	s	2SC403C
Q707	8-724-375-01	s	2SC403C
Q708	8-724-375-01	s	2SC403C
Q711	8-729-201-05	s	2SC2878-B
Q712	8-724-375-01	s	2SC403C
Q713	8-724-375-01	s	2SC403C
Q714	8-724-375-01	s	2SC403C
Q716	8-729-190-12	s	2SC2901
Q717	8-729-110-53	s	2SA1005
Q718	8-729-110-53	s	2SA1005
Q719	8-724-375-01	s	2SC403C
Q720	8-724-375-01	s	2SC403C
Q813	8-724-375-01	s	2SC403C
Q814	8-724-375-01	s	2SC403C

Ref.No.	Parts No.	SP	Description
Q815	8-729-603-50	s	2SC403SP
Q816	8-724-375-01	s	2SC403C
Q817	8-724-375-01	s	2SC403C
Q818	8-724-375-01	s	2SC403C
Q819	8-724-375-01	s	2SC403C
Q1001	8-729-201-05	s	2SC2878-B
Q1100	8-724-375-01	s	2SC403C
Q1101	8-729-201-05	s	2SC2878-B
R515	1-214-525-00	s	METAL 47 1% 1/8W
R516	1-214-525-00	s	METAL 47 1% 1/8W
R519	1-214-545-00	s	METAL 330 1% 1/8W
R814	1-214-525-00	s	METAL 47 1% 1/8W
R815	1-214-525-00	s	METAL 47 1% 1/8W
R818	1-214-545-00	s	METAL 330 1% 1/8W
RV1	1-228-292-00	s	VAR,CERMET 2K
RV4	1-224-937-00	s	VAR,CERMET 1K
RV5	1-228-292-00	s	VAR,CERMET 2K
RV6	1-228-294-00	s	VAR,CERMET 10K
RV7	1-228-292-00	s	VAR,CERMET 2K
RV8	1-228-289-00	s	VAR,CERMET 200
RV10	1-228-292-00	s	VAR,CERMET 2K
RV11	1-228-292-00	s	VAR,CERMET 2K
RV12	1-228-293-00	s	VAR,CERMET 5K
RV202	1-228-292-00	s	VAR,CERMET 2K
RV204	1-228-291-00	s	VAR,CERMET 1K
RV205	1-228-292-00	s	VAR,CERMET 2K
RV206	1-228-294-00	s	VAR,CERMET 10K
RV207	1-228-292-00	s	VAR,CERMET 2K
RV208	1-228-289-00	s	VAR,CERMET 200
RV210	1-228-292-00	s	VAR,CERMET 2K
RV211	1-228-292-00	s	VAR,CERMET 2K
RV212	1-228-293-00	s	VAR,CERMET 5K
RV401	1-228-292-00	s	VAR,CERMET 2K
RV402	1-228-292-00	s	VAR,CERMET 2K
RV403	1-228-295-00	s	VAR,CERMET 20K
RV404	1-228-292-00	s	VAR,CERMET 2K
RV405	1-228-291-00	s	VAR,CERMET 1K
RV406	1-228-295-00	s	VAR,CERMET 20K
RV408	1-228-291-00	s	VAR,CERMET 1K
RV409	1-228-290-00	s	VAR,CERMET 500
RV410	1-228-292-00	s	VAR,CERMET 2K
RV415	1-228-289-00	s	VAR,CERMET 200
RV416	1-228-292-00	s	VAR,CERMET 2K
RV512	1-228-292-00	s	VAR,CERMET 2K
RV513	1-228-292-00	s	VAR,CERMET 2K
RV514	1-228-292-00	s	VAR,CERMET 2K
RV515	1-228-292-00	s	VAR,CERMET 2K
RV516	1-226-096-00	s	VAR,CERMET 500K

Ref.No.	Parts No.	SP	Description
RV601	1-228-293-00	s	VAR,CERMET 5K
RV604	1-228-291-00	s	VAR,CERMET 1K
RV605	1-228-291-00	s	VAR,CERMET 1K
RV606	1-228-290-00	s	VAR,CERMET 500
RV701	1-228-292-00	s	VAR,CERMET 2K
RV702	1-228-292-00	s	VAR,CERMET 2K
RV703	1-228-295-00	s	VAR,CERMET 20K
RV704	1-228-293-00	s	VAR,CERMET 5K
RV706	1-228-292-00	s	VAR,CERMET 2K
RV707	1-228-291-00	s	VAR,CERMET 1K
RV708	1-228-295-00	s	VAR,CERMET 20K
RV716	1-228-289-00	s	VAR,CERMET 200
RV717	1-228-292-00	s	VAR,CERMET 2K
RV718	1-228-295-00	s	VAR,CERMET 20K
RV813	1-228-457-00	s	VAR,CERMET 2K
RV814	1-228-292-00	s	VAR,CERMET 2K
RV815	1-228-292-00	s	VAR,CERMET 2K
RV816	1-228-292-00	s	VAR,CERMET 2K
RV1100	1-228-293-00	s	VAR,CERMET 5K
TH701	1-800-202-XX	s	S-10K
TH1001	1-800-202-XX	s	S-10K
TH1002	1-800-202-XX	s	S-10K
TH1003	1-800-202-XX	s	S-10K
TH1004	1-800-202-XX	s	S-10K

Ref.No.	Parts No.	SP	Description
FRAME			
	A-6050-264-A	s	HEAD DRUM ASS'Y,DSH-45A-R
	A-6762-183-A	s	DRUM ASS'Y,UPPER,DSR-45-R
⚠	1-413-166-11	s	SWITCHING REGULATOR,UR-09
	1-557-231-11	o	FLAT CABLE ASS'Y,40P MB-49 TO KY-45
	1-557-232-11	o	FLAT CABLE ASS'Y,50P MB-49 TO MB-52
	1-586-633-00	s	CONDENSATION SENSOR
⚠ CN001	1-508-840-00	o	RECEPTACLE,9P
	1-508-839-00	o	HOUSING,9P
	1-535-070-00	o	CONTACT
⚠ CN002	1-509-546-00	s	RECEPTACLE,3P "AC IN"
CN551	1-561-781-21	s	RECEPTACLE,BNC "REF VIDEO IN"
CN552	1-561-781-21	s	RECEPTACLE,BNC "REF VIDEO IN"
CN553	1-561-781-21	s	RECEPTACLE,BNC "VIDEO IN"
CN554	1-561-781-21	s	RECEPTACLE,BNC "VIDEO IN"
CN555	1-561-781-21	s	RECEPTACLE,BNC "VIDEO OUT"
CN556	1-561-781-21	s	RECEPTACLE,BNC "VIDEO OUT"
CN557	1-564-407-11	s	RECEPTACLE,12P,MALE "DUB/COMPONENT IN"
CN558	1-562-160-00	s	RECEPTACLE,12P,FEMALE "DUB/COMPONENT OUT"
CN559	1-561-045-00	s	RECEPTACLE,7P,FEMALE "DUB (U-MATIC) OUT"
CN560	1-509-095-00	s	RECEPTACLE,8P "MONITOR OUT"
CN561	1-509-184-31	s	RECEPTACLE,XLR,FEMALE "CH-1 IN"
CN562	1-509-184-31	s	RECEPTACLE,XLR,FEMALE "CH-2 IN"
CN563	1-509-176-31	s	RECEPTACLE,XLR,MALE "CH-1 OUT"
CN564	1-509-176-31	s	RECEPTACLE,XLR,MALE "CH-2 OUT"
CN565	1-509-176-31	s	RECEPTACLE,XLR,MALE "MONITOR OUT"
CN566	1-509-184-31	s	RECEPTACLE,XLR,FEMALE "TIME CODE IN"
CN567	1-509-176-31	s	RECEPTACLE,XLR,MALE "TIME CODE OUT"
CN568	1-564-600-11	s	RECEPTACLE,15P,MALE "TBC REMOTE IN"
CN570	1-561-781-21	s	RECEPTACLE,BNC "REF. VIDEO OUT"
CN901	1-508-839-00	o	PULG HOUSING,9P (to SW'ing REG.)
	1-535-070-00	o	CONTACT,MALE
CN902	1-509-889-00	o	PULG HOUSING,12P (to SW'ing REG.)
	1-535-070-00	o	CONTACT,MALE
⚠ CN903	1-509-890-00	o	RECEPTACLE HOUSING,12P (to SW'ing REG.)
	1-535-072-00	s	CONTACT,FEMALE

Ref.No.	Parts No.	SP	Description
H901	8-825-544-20	s	"FULL ERASE"
H902	8-825-554-73	s	PS244-21A "CTL"
H903	A-6736-041-A	s	HEAD ASS'Y,AT EPS244-2103 "AUDIO/TIME CODE"
M801	1-541-163-00	s	DC "CASSETTE-UP"
M841	1-541-163-00	s	DC "THREADING"
M901	A-6737-113-B	s	MOTOR ASS'Y "S-REEL"
M902	A-6737-113-B	s	MOTOR ASS'Y "T-REEL"
M903	8-838-067-01	s	DC,BHF-1912B "CAPSTAN"
M904	1-541-240-00	s	DC,FAN
M905	1-541-240-00	s	DC,FAN
ME601	1-520-439-00	s	"AUDIO CH-1"
ME602	1-520-439-00	s	"AUDIO CH-2"
ME603	1-520-438-00	s	"VIDEO/RF"
PL601	1-518-461-00	s	14V 50mA "AUDIO CH-1 METER"
PL602	1-518-461-00	s	14V 50mA "AUDIO CH-1 METER"
PL603	1-518-461-00	s	14V 50mA "AUDIO CH-2 METER"
PL604	1-518-461-00	s	14V 50mA "AUDIO CH-2 METER"
PL605	1-518-461-00	s	14V 50mA "VIDEO/RF METER"
PL606	1-518-461-00	s	14V 50mA "VIDEO/RF METER"
PL801	1-518-508-00	s	12V 60mA "CASSETTE LAMP"
PL802	1-518-508-00	s	12V 60mA "CASSETTE LAMP"
PM771	1-454-372-11	s	"CLEANER"
PM772	1-454-338-00	s	"PINCH"
PM881	1-454-336-00	s	"T-BRAKE"
PM882	1-454-336-00	s	"S-BRAKE"
PM883	1-454-337-00	s	"MAIN BRAKE"
S601	1-516-608-00	s	SLIDE "BYPASS ON/OFF"
⚠ S901	1-554-256-00	s	ROCKER "POWER"
TM601	1-548-100-11	s	"HOURS METER"

19-4. PACKING MATERIAL AND ACCESSORY (SUPPLIED)

Parts No.	SP	Description
A-6728-928-A	s	EXTENSION BOARD,EX-35
1-560-919-21	o	RECEPTACLE,60P,FEMALE
A-6728-929-A	s	EXTENSION BOARD,EX-36
1-561-654-00	o	RECEPTACLE,86P,FEMALE
A-6728-930-A	s	EXTENSION BOARD,EX-42
1-561-654-00	o	RECEPTACLE,86P,FEMALE
⚠ 1-556-760-00	s	CORD,POWER (3 CORE)
1-557-413-11	s	12PIN DUBBING CABLE
1-560-995-00	s	PLUG,12PIN,MALE
1-562-159-00	s	PLUG,12PIN,FEMALE
3-683-612-12	o	INDIVIDUAL CARTON
3-683-613-03	o	CUSHION,UPPER
3-688-812-01	o	SPACER SIDE
3-683-615-03	o	CUSHION (FRONT),LOWER
3-683-616-03	o	CUSHION (REAR),LOWER
3-701-632-00	s	BAG,POLY (FOR EXTENSION BOARD) (FOR MANUAL)
3-701-649-00	s	BAG,POLY (FOR BVW-40P,40S)
Standard products		9PIN REMOTE CONTROL CABLE
1-560-651-00	s	PLUG,9PIN,MALE
1-561-749-00	s	SHELL

19-5. FIXTURE (OPTIONAL)

Parts No.	SP	Description
J-6001-820-A	s	DRUM ECCENTRICITY GAUGE (3)
J-6001-830-A	s	DRUM ECCENTRICITY GAUGE (2)
J-6001-840-A	s	DRUM ECCENTRICITY GAUGE (1)
J-6087-000-A	s	DRUM ECCENTRICITY GAUGE (5)
J-6080-008-A	s	CASSETTE REFERENCE PLATE
J-6080-011-A	s	REEL TABLE TENSION GAUGE
J-6080-013-A	s	DIHEDRAL ADJUSTMENT SCREW
J-6080-570-A	s	FLATNESS PLATE
J-6150-960-A	s	REEL MOTOR SLANTNESS CHECK JIG
J-6190-800-A	s	TENSION REGULATOR SLANTNESS CHECK TOOL
Y-2031-001-0	s	CLEANING FLUID
2-034-697-00	s	CLEANING PIECE
7-732-050-10	s	TENSION SCALE (20G FULL SCALE)
7-732-050-20	s	TENSION SCALE (50G FULL SCALE)
7-732-050-30	s	TENSION SCALE (100G FULL SCALE)
7-732-050-50	s	TENSION SCALE (500G FULL SCALE)
7-723-902-00	s	INSPECTION MIRROR
8-960-098-02	s	ALIGNMENT TAPE,CR2-1PS
8-960-098-37	s	ALIGNMENT TAPE,CR5-1APS
9-911-053-00	s	THICKNESS GAUGE
Standard products		HEAD DEMAGNETIZER (HE-4)